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Scientific, Technical and Economic Committee for Fisheries (STECF)

Evaluation of Fishing Effort Regimes Regarding Annexes IIA, IIB and IIC of TAC & Quota Regulations, Celtic Sea and Bay of Biscay (STECF-11-13)

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EVALUATION OF FISHING EFFORT REGIMES REGARDING ANNEXES IIA, IIB AND IIC OF TAC & QUOTA REGULATIONS, CELTIC SEA AND BAY OF BISCAY (STECF-11-13)

THIS REPORT WAS REVIEWED DURING THE PLENARY MEETING HELD IN

BRUSSELS 7-11 NOVEMBER 2011

Request to the STECF

STECF is requested to review the report of the **EWG-11-11** held from September 26-30, 2011 in Cadiz, evaluate the findings and make any appropriate comments and recommendations.

When reviewing this STECF EWG reports, the STECF is asked to discuss a possible endorsement of correction factors established by the STECF EWG by taking into account evaluations of Catch per Unit of Effort, what would allow the Commission properly implementing several provisions laid down in the Cod plan adopted through R(EC) No 1342/2008.

Introduction

The report of the Expert Working Group on Evaluation of fishing effort regimes regimes regarding Annexes IIA, IIB and IIC of TAC & Quota Regulations, Celtic Sea and Bay of Biscay (EWG-11-11) was reviewed by the STECF during its 38th plenary meeting held from 7 to 11 November, 2011, Belgium. The following observations, conclusions and recommendations represent the outcomes of that review.

STECF OBSERVATIONS

General observations

The STECF expert working group on effort management EWG -11-06 met in Galway in June 2011 and in Cadiz in September 2011. The TOR for the meetings included conducting effort and catch reviews for the Baltic, Annex II A, B and C stocks, Celtic Sea, Bay of Biscay and Deep Sea/Western waters. The data call for this meeting was sent out in February 2011. A number of Member States submitted material in good time, several submitted data close to the effort meeting and some elements of the material were obtained in the first day of the meeting. Only Spain failed to provide any inputs in due time.

STECF notes that the procedures for automatic and manual checks introduced by the JRC have provided the group with more time to address the different ToRs.

STECF specific observations

Annex IIA of Council Reg.s 40/2009 in the context of the cod recovery plan (Regulation 1342/2008)

In the Kattegat, the fishery is dominated by TR2 gears and the contribution to the overall effort by other fleets not regulated by the cod plan has declined. However, catches of cod, sole and plaice by under 10m vessels, which are also unregulated, has been increasing.

STECF notes that interpretation of trends in the North Sea area is not straightforward because some gear groups participate in a variety of different fisheries. Unregulated gears and under 10m vessels take relatively small quantities of cod, sole and plaice.

STECF notes that the principle gears operating in the Irish Sea are various types of trawl (particularly TR2) and that effort data is reasonably complete. Unregulated gears have increased in recent years (although catches by these gears are small). Discard data are rather incomplete for this area and as a consequence, rankings of gears are based on landings only.

STECF notes that the fishery in the West of Scotland is mainly by otter trawls (TR1 offshore and TR2 closer inshore). Total effort and trawl effort have declined markedly but catches of cod remain high and discarding is a problem. Unregulated gears represent a comparatively high proportion of effort but catches of cod, sole and plaice by such gears are low.

The cumulative percentage catches for the Kattegat, North Sea and West of Scotland by gear group are given in Table 5.2.1together the gear types to which adjustments in effort apply (red) and those contributing less than 20% of catches (green).

Table 5.2.1 Cumulative percentage cod catches for the Kattegat, North Sea, Irish Sea and West of Scotland and the gear types to which adjustments in effort apply (red) and gear types contributing less than 20% of catches (green). Note that the rankings for the Irish Sea are based only on landings data.

3a Kattegat

Gear Group	2010		
	catch (t)	% catch	cum. %
TR2	201	93.056	100.001
GN1	10	4.63	6.945
TR1	4	1.852	2.315
GT1	1	0.463	0.463
LL1		0	0
TR3		0	0

3b North Sea

Gear Group	2010		
	catch (t)	% catch	cum. %
TR1	23787	62.53483	100
TR2	7703	20.2508	37.46517
GN1	3384	8.896367	17.21436
BT2	2127	5.591777	8.317998
GT1	409	1.075241	2.726221
BT1	323	0.849151	1.650981
LL1	287	0.754509	0.80183
TR3	18	0.047321	0.047321

3c Irish Sea

Gear Group	2010		
	land(t)	% land	cum. %
TR1	241	42.206655	100
TR2	210	36.777583	57.79335
GN1	78	13.660245	21.01576
BT2	40	7.0052539	7.355517
GT1	2	0.3502627	0.350263
LL1		0	0

3dWest of Scotland

Gear Group	2010		
	catch(t)	% catch	cum. %
TR1	1227	97.92498	100
TR2	23	1.835595	2.07502
GN1	3	0.239425	0.239425
LL1	0	0	0
BT2		0	0
BT1		0	0

Table 5.2.2 provides results for annual ratios of cod landings by fisheries with quantitative discard information versus total cod landings by these fisheries. Judging the ratio value that constitutes ‘adequate’ sampling is somewhat subjective. Here, a value of 0.1 or greater in any of the last three years 2008 -2010 is considered reasonable, while a value between 0 and 0.1 provides some information but is less than ideal. No sampling at all delivers a zero value and is inadequate. Consistent with the insufficient number of fisheries with respective discard estimates, the immediate conclusion is that the ratio is very low for some of the passive gears in all four management areas 3a-d. STECF notes, however, that discard information for the major regulated gear group TR2 in area 3a (Kattegat) cover almost all landings reported.

Table 5.2.2. Ratios of landings of discard sampled gears to total landings for gears in regulated areas 3a to 3d

ANNEX	REG AREA COD	REG GEAR COD	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010
IIa	3a	GN1	COD								0.01
IIa	3a	GT1	COD								0.52
IIa	3a	none	COD								1
IIa	3a	OTTER	COD								0.95
IIa	3a	POTS	COD		0			0	0		1
IIa	3a	TR1	COD	0.43	0.38	0.3	0.35	0.38	0.21	0.05	0.22
IIa	3a	TR2	COD	0.77	0.9	0.99	0.99	1	0.97	0.97	0.91
IIa	3b	BT1	COD	0.01			0.83		0.87		
IIa	3b	BT2	COD	0	0.19	0.22	0.81	0.92	0.81	0.24	0.93
IIa	3b	DEM_SEINE	COD	0	1	1		1	0		
IIa	3b	GN1	COD	0.01	0	0.01			0	0	0.04
IIa	3b	GT1	COD					0	0	0	0.04
IIa	3b	none	COD								0.81
IIa	3b	OTTER	COD	0	0	0.3	0	0.02	0.39	0.54	0.65
IIa	3b	PEL_SEINE	COD	0	1	1	1	0			1
IIa	3b	POTS	COD								0.11
IIa	3b	TR1	COD	0.87	0.83	0.77	0.68	0.78	0.75	0.74	0.81
IIa	3b	TR2	COD	0.54	0.6	0.65	0.65	0.51	0.54	0.48	0.51
IIa	3b	TR3	COD		0.04	0					0
IIa	3c	BT2	COD			0.02		0.51	0.56	0.8	0.66
IIa	3c	OTTER	COD		0.34	0		0	0		0
IIa	3c	POTS	COD		0.43						
IIa	3c	TR1	COD	0.05	0.14	0.01	0	0.01			
IIa	3c	TR2	COD	0.01	0.13	0.28	0.13	0.07	0.1	0	0.29
IIa	3d	DEM_SEINE	COD	1	0	0	0	0	0	0	0
IIa	3d	OTTER	COD	0.41							0
IIa	3d	TR1	COD	0.72	0.7	0.69	0.71	0.66	0.6	0.48	0.78
IIa	3d	TR2	COD	0.87	0.76	0.78	0.56	0.47	0.66	0.67	0.02

Table 5.2.3 presents the gear group specific conversion factors for the implementation of the exchange of maximum allowable fishing effort across groups of effort regulated gears as estimated in accordance with Article 17 of Council Reg. (EC) No 1342/2008. Individual tables cover areas 3a to 3d. The conversion factors are based on CPUE as estimated by STECF (EWG 11-11) and their representativeness is indicated by a traffic light approach using the criteria outlined above as boundaries between the three colours STECF notes that EWG 11-11 has used a pragmatic approach for judging the quality of the correction factors calculated as defined by the Commission Regulation (EU) No 237/2010 article 8(b). It also notes how a further and more scientifically based approach for dealing with these correction factors is currently under development.

Table 5.2.3. Conversion factors for exchange of effort between gears in areas 3a to 3d. Green cells provide reasonably reliable conversions, yellow are fairly reliable but red are unreliable (no discard data collected).

3a Kattegat

	donor gear	receiving gear					
		GN1	GT1	LL1	TR1	TR2	TR3
3a	GN1		1	0.321	1	1	1
3a	GT1	0.189		0.06	0.202	0.33	1
3a	LL1	1	1		1	1	1
3a	TR1	0.931	1	0.299		1	1
3a	TR2	0.571	1	0.183	0.613		1
3a	TR3	0.137	0.727	0.044	0.147	0.24	

3b North Sea Skaggerak

	donor gear	receiving gear BT1	BT2	GN1	GT1	LL1	TR1	TR2	TR3
3b	BT1		1	0.21	1	0.67	0.18	0.725	1
3b	BT2	0.359		0.075	0.588	0.241	0.064	0.26	1
3b	GN1	1	1		1	1	0.855	1	1
3b	GT1	0.61	1	0.128		0.409	0.11	0.442	1
3b	LL1	1	1	0.313	1		0.268	1	1
3b	TR1	1	1	1	1	1		1	1
3b	TR2	1	1	0.29	1	0.924	0.248		1
3b	TR3	0.133	0.371	0.028	0.218	0.089	0.024	0.097	

3c Irish Sea

	donor gear	receiving gear BT2	GN1	GT1	LL1	TR1	TR2
3c	BT2		0.009	0.091	0.014	0.072	0.636
3c	GN1	1		1	1	1	1
3c	GT1	1	0.104		0.15	0.795	1
3c	LL1	1	0.692	1		1	1
3c	TR1	1	0.13	1	0.188		1
3c	TR2	1	0.015	0.143	0.021	0.113	

3d West of Scotland

	donor gear	receiving gear BT1	BT2	GN1	LL1	TR1	TR2
3d	BT1		1	0.009	1	0.001	0.013
3d	BT2	1		0.009	1	0.001	0.013
3d	GN1	1	1		1	0.065	1
3d	LL1	1	1	0.009		0.001	0.013
3d	TR1	1	1	1	1		1
3d	TR2	1	1	0.727	1	0.047	

Annex IIB of Council Reg. 40/2009 in the context of the recovery plan for Southern hake and Nephrops (Regulation 2166/2005)

STECF considers that given the lack of new data from a key player in this area (Spain), it is not possible to say anything more than was said in the STECF/SGMOS-10-05 report in 2010 (https://stecf.jrc.ec.europa.eu/reports/effort).

Annex IIC of Council Reg. 40/2009 in the context of the recovery of Western Channel sole (proposal COM (2003) 819 final)

STECF notes the significant improvement in the provision of data from Member States and the requested fleet specific effort data is now regarded as complete. Lack of complete discard data (although improving) prevents precise review of the effects of the defined derogations.

STECF notes that there is little indication of effort reductions and effort for unregulated gears remains relatively high. It also notes that un-regulated effort (in days at sea) by the otter trawl fleet accounts for about 85% of the effort and contributes significantly to the estimates of landings in weight of cod (91% in 2010), plaice (34%) and sole (about 33 The LPUE for cod (g kwday-1) from unregulated gears exceeds the LPUE of the regulated gears.

Review of Celtic Sea effort and catches

STECF notes that revised data was provided only by, France and that most of the findings and conclusions remain broadly similar to previous years with an overall reduction in effort in the area.

Review of Bay of Biscay Sea effort and catches

STECF notes that for 2010 it was possible for the first time to provide information on both the regulated and unregulated parts of the fleet. STECF also notes the general rise in fishing effort in recent years, particularly by trawlers.

STECF CONCLUSIONS AND RECOMMENDATIONS

General

STECF endorses the main findings and conclusions of the reports of the EWG 11-11 and provides the following specific recommendations and conclusions:

Annex IIA of Council Reg.s 40/2009 in the context of the cod recovery plan (Regulation 1342/2008)

STECF concludes that based on the method set out in the Regulation under article 12 of the cod plan, the gears to which effort adjustments in 2011 apply are as follows: Kattegat = TR2; North Sea = TR1 and TR2; Irish Sea = TR1, TR2 and GN1 and West of Scotland = TR1.

STECF concludes that although the ratio of landings with quantitative discard estimates in area 3b of gear groups BT2, TR1 and TR2 are variable, they appear to be sufficiently high and that the raising procedure applied to estimate the overall discards shall result in representative CPUE values. Coverage of submitted discard estimates in area 3c is very limited for some gears. In area 3d, STECF concludes that the ratio between landings with discards and the total landings for TR1 and TR2 is high enough and therefore the raising procedure applied to estimate the overall discards is appropriate to estimate representative CPUE.
STECF considers the conversion factors between donor and receiving vessels as sufficiently representative when highlighted green (good) and yellow (fair) (Table 5.2.3). STECF considers the respective conversion factors unrepresentative if highlighted in red and therefore advises that such factors are not reliable and should not be applied for effort transfers between regulated gears.

STECF concludes that the use of conversion factors highlighted in green and yellow is a pragmatic working arrangement to cope the issue of effort transfer across gear groups with different cpues. It also concludes that the traffic light approach proposed

for the correction factors depends on setting boundaries appropriate to different levels of confidence in the underlying data. STECF also proposes the development of a further and more scientifically based approach for dealing with these correction factors and notes that this will be addressed by a future STECF EWG dealing with fishing effort conversions factors.
Annex IIB of Council Reg. 40/2009 in the context of the recovery plan for Southern hake and Nephrops (Regulation 2166/2005)

STECF recommends that given the lack of new data from a key player in this area (Spain) the data are not representative of the true catches and effort from the area and should be interpreted with caution.

Annex IIC of Council Reg. 40/2009 in the context of the recovery of Western Channel sole (proposal COM (2003) 819 final)

Given that un-regulated effort (in days at sea) by the otter trawl fleet accounts for about 85% of the total demersal effort and accounts for about one third of the catches of sole, STECF suggests that consideration be given to controlling otter trawl effort together with beam trawl effort in an attempt tocontrol fishing mortality on sole and other species.

Review of Celtic Sea effort and catches

STECF notes that before providing advice on the merits of only including Divisions VIIfg in any future cod management plan in the Celtic Sea area, additional information (such as information on spawning or nursery grounds) in areas outside VIIfg is required in order to judge whether there is a need for the plan to cover other areas also.

REPORT TO THE STECF

EXPERT WORKING GROUP ON EVALUATION OF FISHING EFFORT REGIMES REGARDING ANNEXES IIA, IIB AND IIC OF TAC & QUOTA REGULATIONS, CELTIC SEA AND BAY OF BISCAY (EWG-11-11)

Cadiz, Spain, 26-30 September 2011

1. SUMMARY OF FINDINGS FOR ANNEX II CELTIC SEA AND BAY OF BISCAY

Review of Annex IIA of Council Reg.s 40/2009 in the context of the cod recovery plan (Regulation 1342/2008):

- STECF-EWG and JRC have prepared a series of spreadsheets containing the effort and catch material which is believed to cover the basic requirements of the Commission in answer to most of the TORs. Based on 2011 experiences the group considers that a large proportion of the effort data and landings information are robust and suitable for use in a management context. Where shortfalls still occur, attention is drawn to these in the relevant areas. There are still concerns over the quality and coverage of discard data and the group considers that this should be used with caution. Some time was spent investigating methods to present how representative discard data might be.
- STECF-EWG notes consistency between the updated fleet specific effort and catch data provided in 2011 and the historic information provided in previous years for an increasing number of Member States. In 2011 the most significant data shortfall was the absence of any new information from Spain. France; identified and corrected problems in the 2010 data, however, the data for a) 2002 data are known to be erroneous b) the 2009 data seem to be identical to the 2008 data. STECF-EWG notes that the shift away from the derogation based approach in 40/2008 to the reduced gear categories in 40/2009 has simplified the task and has to lead to more reliable categorisation and reporting.
- STECF-EWG estimated further effort reductions from 2008 to 2010 in some areas regarding most of the cod, plaice and sole sensitive derogations, particularly trawl gears and gill netters. In some areas, however, the aggregate change was rather small and in most areas the reductions fell short of those implied by the cod recovery plan schedule of effort cuts for 2010
- STECF-EWG continues to observe a high constancy in the catch compositions of the fleets defined in Annex IIA.
- Information was presented for the first time on Fully Documented Fisheries
- SGMOS-EWG adopted a new approach to the spatial effort plots presenting data according to a scale of absolute landings rather than a percentile approach.
- Kattegat: STECF–EWG notes high confidence in the data for this region where the regulated fishery is dominated by TR2 and the contribution of unregulated gears is in decline. However, catches of cod, sole and plaice by under 10m vessels (also unregulated) has been increasing
- North Sea: Data are generally good for this area and following the adjustments to the French 2010 data the main outstanding effort issues are with French data in 2002 and 2009. Regulated gears account for 70% of effort. Interpretation of trends in this area is difficult because a variety of different fisheries take place within some gear groups. A useful discussion of CPUEs in derogated fleets is included pointing out the care needed in interpreting Article 13 results. Unregulated gears and under 10m vessles take relatively small quantities of cod sole and plaice.

- Irish Sea: EWG notes that the principle gears operating here are various types of trawl (particularly TR2) and that effort data is reasonably complete. Unregulated gears have increased in recent years (although catches y these gears are small). Discard data is rather incomplete for this area and as a consequence rankings of gears are based on landings – TR1 is the main gear catching cod. Under 10m vessels take only a small proportion of cod.
- West of Scotland: The fishery is mainly by otter trawls (TR1 offshore and TR2 closer inshore). Total effort and trawl effort have declined markedly but catches of cod remain high and discarding is a problem. Unregulated gears (including pelagic trawls, pots and dredges represent a comparatively high proportion of effort but catches of cod, solae and plaice are low. Landings by under 10m vessels are also low.

Review of Annex IIB of Council Reg. 40/2009 in the context of the recovery plan for Southern hake and *Nephrops* (Regulation 2166/2005)

- STECF-EWG notes that the major improvements in the effort data provided by Spain and Portugal in 2010 were not followed up in 2011 and only Portugal submitted 2010 data.
- Estimates of discards provided by Spain in previous years were considered to be unrealistic and STECF-EWG instead used discard rates submitted to ICES in order to proceed with catch estimates.
- STECF-EWG considers that given the lack of new data from a key player in this area, it is not possible to say anything more than was said in 2010.

Review of Annex IIC of Council Reg. 40/2009 in the context of the recovery of Western Channel sole (proposal COM (2003) 819 final)

- STECF-EWG notes that there have been significant improvements in the provision of data from Member States and the requested fleet specific effort data is now regarded as complete. Lack of complete discard data (although improving) continues to impair the estimation of catches and some inconsistent data aggregations prevents a precise review of the effects of the defined derogations.
- STECF-EWG notes that there are few indications of effort reductions in terms of kW*days, GT*days or number of vessels regarding the sole sensitive derogations. The data suggest, however, that effort by unregulated gears, while still relatively high, has declined in the last couple of years.
- STECF-EWG notes that the non-regulated (effort in days at sea) otter trawl fleet accounts for about 85% of the effort and contributes significantly to the estimates of landings in weight of cod (91% in 2010), plaice (34%) and sole (about 33%). In the case of cod, unregulated otter trawl take about 84% of the total

Review of Celtic Sea effort and catches in the context of proposals to extend the cod recovery zone to include cod stocks in this area

- Revised data was provided by one of the key players, France, operating in the fisheries of the Celtic Sea region. Unfortunately, Spain did not provide any data in 2011 so it is difficult to fully evaluate the effects of the effort update by France. The coverage was nevertheless considered adequate to provide a basic description of activities and catches using the framework of the Annex IIA as applied in other areas.

- Most of the findings and conclusions remain broadly similar to previous years. Overall there has been a reduction in effort in the area.
- STECF EWG was able to provide summaries for two different spatial descriptions. One for the Celtic Sea as a whole and one for ICES areas VIIfg only.
- Trawl effort predominated in both areas and has declined in both areas recently.
- Results suggested that the VIIfg definition of the Celtic Sea accounted for a large part of the cod landings of the area as a whole and that the CPUE of cod in this area is higher than the area as a whole.
- STECF EWG discussed whether any future extension of the cod recovery plan to apply to the Celtic Sea cod stock should apply to the whole area or would be effective if restricted to the smaller subset area. It was considered that additional information (such information on spawning area or nursery ground) in areas outside VIIfg would be needed to make such a judgement.

Review of Bay of Biscay Sea effort and catches

- A review was conducted of the Bay of Biscay.
- The nature of the sole management plan required the data call to take this into account, and the material available for this area (2010 only) permitted a subdivision into regulated and unregulated effort and catches.
- Regrettably there was no update of Spanish data
- EWG-11-11 notes that the most noticeable feature in the area is the general rise in fishing effort in recent years, particularly by trawlers. This is unlike almost all other regions.

2. INTRODUCTION

The STECF Sub-group on "fishing effort management" held its first annual meeting in Galway, Ireland 6-10 June 2011 (EWG-11-06). A progress report from the first meeting was made available at the July STECF plenary.

In common with previous years a final meeting (EWG-11-1) was held, this time in Cadiz, Spain, 26 -30 September ostensibly to complete the report writing. All available data was supplied prior to the meeting (Spain did not submit any material in 2011) and was processed in advance of the meeting. Considerable progress was made compared to previous years and more time was available for discussion and report writing

To provide continuing transparency in the scientific advisory process, the meeting was open to observers (sec. 4), including stakeholder representatives. Industry representatives did not, however, take up the opportunity to participate in each of the meetings.

In order to keep the documentation manageable, separate reports were prepared for the Baltic Sea work and the Deep Sea /Western Waters work. *This report* covers the work associated with Annex II and the cod plan and includes the Celtic Sea and Bay of Biscay reviews.

3. TERMS OF REFERENCE

DG MARE of the EU-Commission provided the STECF Subgroup EWG-11-06 and 11-11 with an extensive list of TORs reflecting the extended tasks of the group in 2011.

The overarching request was for: i) an assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes as defined in Annex II of the TAC and Quota Regulations Regulation and including an assessment of fishing effort deployed by fisheries and métiers which would be affected by the extension of the cod recovery plan to the Celtic Sea and an assessment of effort in the Biscay sole fishery.); ii) an assessment of effort in the Baltic Sea and iii) an assessment of effort in Deep Sea and Western Waters regimes

The overall list of TORs for EWG effort management work in 2011 are listed below. Note that as mentioned above, the Baltic Sea TORS and the Deep Sea /Western Waters TORs are dealt with in separate reports.

STECF EWG 11-06 and EWG 11-11

Evaluation of fishing effort regimes in European waters

From 06.06 to 10.06.2011 and

From 26.09 to 30.09.2011

Draft Terms of Reference on 09-03-2011

Request for

1 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Baltic Sea cod management plan R(EC) No 1098/2007

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

Areas covered by the R(EC) No 1098/2007 (Baltic Sea)

(i) ICES division 22 to 24,

(ii) ICES divisions 25 to 28, by distinguishing areas 27 and 28.2

(iii) ICES divisions 29 to 32,

The data should also be broken down by

Member State;

regulated gear types defined in **R(EC) No 1098/2007** (and by associated special conditions defined in the Appendix 6 of the data call);

unregulated gear types catching cod in fishing areas (i), (ii) and (iii);

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and

b. Fishing activity measured in days absent from port (according to definitions adopted in R(EC) No 1098/2007) and fishing capacity measured in kW, GT and in number of vessels concerned per year.

c. Catches (landings and discards provided separately) of cod in the Baltic Sea by weight and by numbers at age.

d. Catches (landings and discards provided separately) of non-cod in the Baltic Sea by species, by weight and by numbers at age

e. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod in the Baltic Sea (such data shall be issued by Member state, fishing area (i), (ii) and (iii) and fishing gear concerned in accordance with Art. 3 of **R(EC) No 2187/2005**).

2. If relevant data are available, to comment on the quality of estimations on total catches and discards.

3. To assess the fishing effort and catches (landings and discards) of cod in the Baltic Sea and associated species corresponding to vessels of length overall smaller than 8 metres in each fishery, by gear and by Member State according to sampling plans implemented to estimate these parameters.

4. To assess fishing mortality by Member State and regulated gear types corresponding to the effort deployed and the calculated maximum effort allocated.

5. To quantify the evolution of the calculated maximum effort allocated to the cod fleet (regulated gear types) in relation to the effort really used by that fleet and highlight possible shifts between metiers.

6. To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2010 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differ~~s~~ from the figures estimated by the STECF for vessels not participating in these trials.

7. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

8. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

9. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

2 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Kattegat (Annex IIA to Regulation (EC) No 53/2010)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing area:

Kattegat (ICES functional unit IIIaS)

The data should also be broken down by

Member State;

regulated gear types defined in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in the Appendix 6 of the data call) ;

unregulated gear types catching cod ;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days, in number of vessels concerned.

b. Catches (landings and discards provided separately) of cod by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding

to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5 To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2010 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differ~~s~~ from the figures estimated by the STECF for vessels not participating in these trials.

6. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

7. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard correction factors to be used (within a MS) for transfering effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to calculated per area per gear group (regulated gear).

Correction factors >=1 will all be set at value 1.

3 – an assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Skagerrak, the North Sea and the Eastern Channel (Annex IIA to Regulation (EC) No 53/2010)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

(i) Skagerrak (ICES functional Unit IIIaN),

(ii) North Sea (EC waters of ICES sub-area IIa and ICES sub-area IV),

(iii) Eastern channel (ICES division VIId)

The data should also be broken down by

Member State;

regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in the Appendix 6 of the data call) ;

unregulated gear types catching cod, sole and plaice in fishing areas (i), (ii) and (iii) ;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days, in number of vessels concerned and days at sea for the sole and plaice fishery.

b. Catches (landings and discards provided separately) of cod, sole and plaice by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod , non-sole and non-plaice by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod, sole and plaice (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod, sole and plaice.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod, sole and plaice and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

6. To describe the spatial distribution of the fishing effort of regulated gears deployed in the the Skagerrak, the North Sea and the Eastern Channel, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine to what extent fishing effort has moved from long distance to coastal areas since the implementation of the first fishing effort regime in such areas.

7. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard correction factors to be used (within a MS) for transfering effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to calculated per area per gear group (regulated gear).

Correction factors >=1 will all be set at value 1.

4 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the West of Scotland (Annex II A to Regulation (EC) No 53/2010)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing area:

West of Scotland (ICES division VIa and EC waters of Vb)

The data should also be broken down by

Member State;

regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in Appendix 6 to the data call as far as relevant) ;

unregulated gear types catching cod ;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) of cod by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding

to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2010 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differs from the figures estimated by the STECF for vessels not participating in these trials.

6. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

7. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard correction factors to be used (within a MS) for transfering effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to calculated per area per gear group (regulated gear).

Correction factors >=1 will all be set at value 1.

5 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Irish Sea (Annex IIA to Regulation (EC) No 53/2010)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing area:

Irish Sea (ICES division VIIa)

The data should also be broken down by

Member State;

regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in Appendix 6 to the data call as far as relevant) ;

unregulated gear types catching cod ;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) of cod by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding

to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5 To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2010 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differs from the figures estimated by the STECF for vessels not participating in these trials. .

6. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

7. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard correction factors to be used (within a MS) for transfering effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to calculated per area per gear group (regulated gear).

Correction factors >=1 will all be set at value 1.

6 – An assessment of fishing effort deployed by fisheries and métiers which will be affected by the extension of the cod recovery plan to the Celtic Sea

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing area:

(i) Celtic Sea (total of ICES divisions VIIb, VIIc, VIIe, VIIf, VIIg, VIIh, VIIj and VIIk) and

(ii) combined area Bristol Channel/South-East Ireland (total of the subset of ICES divisions VIIf and VIIg)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** ;

unregulated gear types catching cod ;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) of cod by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state and fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**).

2. When providing and explaining data in accordance with point (1), the following **specific question** should be answered as well:

For VIIf+VIIg only, identify the **main species** (volume and percentage) caught per gear category, and related trends in recent years. Specify when this calculation has taken account of discards as well.

Special request: to analyse discards and their development per gear type in each of the ICES divisions concerning hake, monkfish and megrim. This analysis should be carried out referring to fish lengths/age of discards

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

6. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

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7 – Assessment of fishing effort deployed by vessels under the Southern hake and Norway lobster plan (Council Regulation (EC) No 2166/2005) operating in the Atlantic waters of the Iberian Peninsula as specified in Annex IIB of Council Regulation (EC) No 53/2010

Terms of Reference:

1. The STECF is requested to compile, validate, analyse and assess the following historical data on fishing effort and catches in relation to vessels under the Southern hake and Norway lobster plan (Regulation (EC) 2166/2005):

details by Member State on both effort (2000-2010) deployed and catches (2003-2010) made by all fishing vessels, included those with less than 10 meters, in each fishery, broken down by age, gear type, and mesh size

The data should be broken down and assessed by:

- Member State;
- regulated gear types, area as laid down in **Annex IIB** of Council **Regulation (EC) No 53/2010** and associated special conditions as laid down in Appendix 6 to the data call; unregulated gear types catching hake and Norway lobster;

for the following parameters:

a. fishing effort measured in kW.days, in GT.days and in number of vessels concerned;

b. catches (landings and discards provided separately) of hake and Norway lobster by weight and by numbers at age;

c. catches (landings and discards provided separately) of species other than hake and Norway lobster in areas covered by Annex IIB mentioned above (a particular attention should be paid to Anglerfish catches), by species, by weight and by numbers at age;

d. landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of hake, Norway lobster and Anglerfish in areas covered by Annex IIB (such data shall be issued by Member state, fishing gear and special conditions listed in **Annex IIB of Council Regulation (EC) No 53/2010**);

In assessing the data described above, particular attention should be paid to:

- the quality of estimates of total catches and discards;
- both the fishing effort and catches including landings and discards of hake, Norway lobster, anglerfish, and associated species in relation to vessels of overall length smaller than 10 metres in each fishery, by gear (regulated and unregulated gears) and by Member State. The representativeness of data originated from sampling schemes should also be assessed.

- to the description of the spatial distribution of the fishing effort of regulated gears deployed in the Atlantic waters of the Iberian Peninsula according to data reported in logbooks on the basis of ICES statistical rectangles with the aim to determine to what extent fishing effort has moved from long distance to coastal areas since the implementation of the fishing effort regime.

An excel table listing the kW.days from 2000 to 2010 broken down per gear type, special condition and Member State should be made available.

2. In the context of the revision of the current Southern hake and Norway lobster recovery plan (Council Regulation (EC) No 2166/2005) and on the basis of the data provided, the STECF is requested to assess the fishing effort regime, in particular commenting on the quality and completeness of these data used to assess the impact of future effort management measures proposed by the Commission.

3. To compare the evaluation of days allocated to the vessels carrying regulated gears (allowed activity) and really used by those vessels.

4. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

5. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

8 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Western Channel

(Western Channel sole stocks ICES zone VIIe, Annex IIC to Regulation (EC) No 53/2010)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing area:

Western Channel (ICES division VIIe)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex IIC** to **R(EC) No 53/2010** (and by associated special conditions defined therein as far as relevant) ;

unregulated gear types catching sole ;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) of sole by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-sole by species, by weight and by numbers at age

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of sole (such data shall be issued by Member state and fishing gear listed in **Annex IIC to R(EC) No 53/2010**).

2. If relevant data are available, to comment on the quality of estimations on total catches and discards.

3. To assess the fishing effort and catches (landings and discards) of sole and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

4. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

5. To compare the evaluation of days allocated to the vessels carrying regulated gears (allowed activity) and really used by those vessels.

6. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

7. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9 - Assessment of fishing effort and evaluation of management measures to be assessed in 2009 (Deep sea and Western Waters effort regime)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

(i) ICES area I (EU waters; non EU waters), only linked to Deep Sea species

(ii) ICES area II (EU waters; non EU waters), only linked to Deep Sea species

(iii) ICES area III (EU waters; non EU waters), only linked to Deep Sea species

(iv) ICES area IV (EU waters; non EU waters), only linked to Deep Sea species

(v) ICES area V (EU waters; non EU waters)

(vi) ICES area VI (EU waters; non EU waters)

(vii) ICES area VII excluding VIId (EU waters; non EU waters)

(viii) ICES division VIId

(ix) the Biologically Sensitive Area as defined in Article 6 of Reg (EC) No 1954/2003

(x) ICES area VIII (EU waters; non EU waters)

(xi) ICES area IX (EU waters; non EU waters)

(xii) ICES area X (EU waters; non EU waters)

(xiii) ICES area XII (EU waters; non EU waters), only linked to Deep Sea species

(xiv) ICES area XIV (EU waters; non EU waters), only linked to Deep Sea species

(xv) CECAF area 34.1.1 (EU waters; non EU waters)

(xvi) CECAF area 34.1.2 (EU waters; non EU waters)

(xvii) CECAF area 34.1.3 (EU waters; non EU waters)

(xviii) CECAF area 34.2 (EU waters; non EU waters)

The data should also be broken down by

- Member State ;
- The following gear types:
  - regulated gear types
    - Beam trawls
    - Bottom trawls & demersal seines
    - dredges
    - drifting longlines or set longlines (bottom)

- driftnets or set gillnets
- trammel nets
- pots & traps

– <u>Unregulated gear types:</u>
  - Pelagic trawls and pelagic seines;
  - longlines (surface)

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) by weight of

– 5 most important (in weight landed) demersal species excluding scallops, edible crab, spider crab,

– Scallops

– Spider crab and edible crab

– 5 most important (in weight landed) Deep-sea species (according to Annex I and II of Reg 2347/2002), only related to fisheries which have been identified with special condition DEEP

– 4 most important (in weight landed) pelagic species, plus always tuna-like species (SKJ,ALB,YFT,BET,SWO).

c. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) by Member State and gear, given by total catches of the gear divided by kW-days and GT-days.

2. If relevant data are available, to comment on the quality of estimations on total catches and discards.

3. When providing and explaining data in accordance with point (1), the following **specific question** should be answered as well

Discuss whether additional data on fishing depth and VMS position could improve the analysis and interpretation of deep sea fisheries, and how these data could be called from MS, processes and presented

4. To identify recent effort trends in pelagic fisheries where possible, in particular in areas XI, X and CECAF areas.

5. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

10 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by the multiannual plan for the sustainable exploitation of the stock of common sole in the Bay of Biscay (R(EC) No 388/2006)

Terms of Reference:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

- ICES division VIIIa, and
- ICES division VIIIb

The data should also be broken down by

a. Member State;

b. type of gear (as laid down in Annex IV of Commission Decision 2008/949/CE) for regulated vessels (as laid down in article 5 of R(EC) No 388/2006)

c. type of gear (as laid down in Annex IV of Commission Decision 2008/949/CE) for unregulated vessels (as laid down in article 5 of R(EC) No 388/2006)

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Fishing capacity in GT

c. Catches (landings and discards provided separately) of common sole (Solea solea) by weight and by numbers at age.

d. Catches (landings and discards provided separately) of species other than common sole, by weight and by numbers at age

2. If relevant data are available, to comment on the quality of estimations on total catches and discards.

3. To assess the fishing effort and catches (landings and discards separately) of common sole and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear and by Member State according to sampling plans implemented to estimate these parameters.

4. To describe the spatial distribution of the fishing effort deployed in the Bay of Biscay, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine the spatial distribution of fishing effort and its development among the time period.

5. To highlight any unexpected evolutions shown by the data which are not in line with general trend.

6. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it.

In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

4. PARTICIPANTS

Participants of the 2 meetings are grouped by STECF members, invited experts, JRC experts and EU-Commission representatives and are listed in Appendix 2.

In 2007, STECF and its subgroups adopted a new working style with the opportunity for stakeholders to participate as observers to improve transparency in scientific evaluations. No stakeholder participants attended in 2011

5. REPORT NOTATIONS

The compilation of effort data as described in this report represents a continuation of a process which was initiated in association with the establishment of recovery plans for various European cod and hake stocks. The notation and categorisation of effort used has reflected that used in the relevant technical regulations. The most recent revision of the cod recovery plan, and the associated effort regime are described in Regulation 1342/2008.

Under the revised 'cod plan' the following gear groupings are set out in Annex I of the Regulation together with areas in which they apply. Throughout the report reference is made to gears such as TR1, TR2 etc. Under the revised scheme Member States are allocated 'effort pots' in KW*days for each category which can then be managed nationally. EU allocated 'days at sea' per vessel are no longer applicable. The following summary of gear and area codes that apply in the current cod plan is taken from Annex 1 of Regulation 1342/2008.

ANNEX I

Effort groups are defined by one of the gear groupings set out in point 1 and one of the geographical areas set out in point 2.

1. Gear groupings

(a) Bottom trawls and seines (OTB, OTT, PTB, SDN, SSC, SPR) of mesh:
TR1 equal to or larger than 100 mm,
TR2 equal to or larger than 70 mm and less than 100 mm,
TR3 equal to or larger than 16 mm and less than 32 mm;

(b) Beam trawls (TBB) of mesh:
BT1 equal to or larger than 120 mm
BT2 equal to or larger than 80 mm and less than 120 mm;

(c) Gill nets, entangling nets (GN);

(d) Trammel nets (GT);

(e) Longlines (LL).

2. Groupings of geographical areas:
For the purposes of this Annex, the following geographical groupings shall apply:
(a) Kattegat;
(b) (i) Skagerrak; (ii) that part of ICES zone IIIa not covered by the Skagerrak and the Kattegat;

ICES zone IV and EC waters of ICES zone IIa; (iii) ICES zone VIId;
(c) ICES zone VIIa;

(d) ICES zone VIa.

This categorisation is relatively simple when compared to that of the previous version of the cod recovery plan , and the number of 'special conditions' under which vessels have differing allocations of effort is relatively restricted. The current cod recovery plan makes allowance for vessels which can demonstrate a track record of having caught less than 1,5% cod to be excluded from the effort regime (Regulation 1342/2008, Article 11, para 2b). There is also scope for groups of vessels to be allocated additional effort if they participate in discard reduction or cod avoidance schemes leading to equivalent or greater reductions in cod mortality than the corresponding effort restriction (Regulation 1342/2008, Article 13, para 2c). These conditions are represented in the database as follows:

Condition	Code
Effort deployed by those boats granted the <1.5% derogation excluding them from the effort regime	CPart11
Effort deployed by vessels operating in Member State schemes under Article 13	CPart13

Notation devised for effort categories specified under Annexes IIB and IIC of Regulation (EC) No. 40/2008 remains the same as in previous reports. Under Annex IIB gear groups are defined under point 3 and special conditions under point 7.2. In 2007 gear group definitions were made for bottom trawls, gill nets and bottom long lines. These groupings were merged in the 2008 legislation. The working group considered maintaining the categories as defined in 2007 was important in terms of maximising the clarity of information from results. Therefore gear groupings have been kept consistent with those from the Annex IIB in 2007 (found in regulation (EC) No. 41/2007). Table 5.3 links notation with gear group and special conditions. So, for example, a vessel using a gill net of mesh size ≥ 60mm and conforming to the hake catch composition rules would belong to derogation "3.b.i IIB72a".

Under Annex IIC gear groups are defined under point 3 and special conditions under point 7. Table 5.4 links notation with gear group and special conditions. So, for example, a vessel using a static net of mesh size less than 220mm belongs to derogation "3.b".

Table. 5.3 Gear group and special conditions of Annex IIB, Reg. (EC) No. 40/2008

Derogation			Mesh size range		Special Condition	
Gear group Point 3 [1]	Special condition Point 7 [2]	Gear	mesh size mm From	mesh size To mm	Hake landings < 5 tonnes in each of the years 2001, 2002 and 2003	Nephrops landings < 2.5 tonnes in each of the years 2001, 2002 and 2003
3.a		TD	32	inf		
3.b		G	60	inf		
3.c		LL	-	-		
3.a.i	7.2.(a) & 7.2.(b)	TD	32	inf	x	x
3.b.i	7.2.(a) & 7.2.(b)	G	60	inf	x	x
3.c	7.2.(a) & 7.2.(b)	LL	-	-	x	x

TD = Trawl or Danish seine or ‘similar gears’ (dredges are included under similar gears)
G = Gill net
LL = Long lines

1. Gear groupings correspond to Annex IIB found in Reg (EC) No. 41/2007.

Special conditions 7.2(a) and 7.2(b) can not be complied with independently.

Table. 5.4 Gear group and special conditions of Annex IIC, Reg. (EC) No. 40/2008. Note that no special conditions are currently in operation under Annex IIC.

Derogation			Mesh size range		Special Condition
Gear group Point 3	Special condition Point 7	Gear	mesh size mm From	mesh size To mm	
3.a		BT	80	inf	none
3.b		GE & TR	0	219	none

BT = Beam Trawl
GE = Gill net or entangling net
TR = Trammel net

5.1. Data call

On 23rd February 2011 the Commission DG Mare requested that Member States electronically submit fleet specific catch and effort data no later than 6th May 2011. A corrigendum was issued on 23rd March 2011 clarifying the data submission relating to FDF (fully documented fisheries). A reminder was sent to Member States with a final deadline of 20th May 2011(see. Appendix 2).

For the cod recovery plan stocks, the call was based on the new cod recovery plan Annex. For other stocks and areas operating under effort management regimes, the previous effort Annexes were used .

STECF SGRST notes that the gear categories used in the current cod recovery plan are not aligned with the definitions used in the Commission's Data Collection Framework. Improved correspondence between the two sets of definitions should help improve the quality of the data available to STECF SGRST.

5.2. Data policy, formats and availability

Originally, the catch and effort data base structures used by STECF-SGRST were developed by the ICES Study Group on the Development of Fishery-based Forecasts (ICES CM 2004/ACFM:11, 41 pp.) with few amendments required for the review of fishery regulations. The format of the fleet specific data on catches including discards and effort is given in Appendix 2 of this report. There have been numerous changes to the original database and the way in which data are stored and accessed in order to reflect changes to some of the effort regimes and to accommodate data from deep-water and Fully Documented Fisheries.

5.2.1. Data policy

Experts reported about national data policies of the national fleet specific landings, discards and effort data in support of a continued use of the data by STECF-SGRST but with the required permission for any use by other scientific or non-scientific groups. This implies that national experts need to be contacted for their consent before granting access to the data. However, Denmark and Portugal reserves the right of the deletion of the national data on request.

JRC requests that it is informed about applications of data access and their notifications.

5.2.2. Nominal fleet specific effort data 2000-2010

The fleet aggregation according to the derogations (gear group, mesh size and management area) defined in Annexes IIA-C or aggregation according to the revised cod plan is within the competence of the Member States' institutes. While every attempt is made to encourage a consistent approach, some differences between countries due to availability of essential information, different interpretations and/or different expertise to manage the extensive databases is known to occur. A number of Member States invested additional time in improving their data submissions and the overall quality is believed to have improved

EWG-11-11 notes that assignment of derogations is based on best expert knowledge and data availability, which also reflects cooperation with the national control and enforcement institutions. The assignment of 'cod plan' gears is more straightforward and going forward the quality of data should improve further. The availability of the fleet specific effort data requested is summarised in the following control notes (prepared by JRC) which tabulates how much data was supplied by each country and provides some quality control notes.

Table 5.2.2.1 Overview on 2000-2010 effort data reports provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 40/2008 and 43/2009

Country	**Data Submission**	**First Submission (Deadline 6-May)**	**Reviewed by JRC (New deadline to upload data 20-May)**	**Latest Submission**
BEL	DCF website	27-May	3-June	3-June
DEN	DCF website	6-May	17-May	9-June
EST	DCF website	5-May	26-May	
FIN	DCF website	6-May	27-May	
FRA	DCF website	17-May	30-May	5-Sept
GER	DCF website	2-May	24-May	3-May
IRL	DCF website	6-May	27-May	
LAT	DCF website	6-May	26-May	27-May
LIT	DCF website	5-May	25-May	6-May
NED	DCF website	5-May	26-May	

POL	DCF website	6-May	30-May	
POR	DCF website	6-May	26-May	11-May
SPN	none			
SWE	DCF website	6-May	26-May	
UK SCO	DCF website	12-May	31-May	
UK	email	3-June	7-June	7-June

List of data deficiencies, inconsistencies and manipulation observed by JRC on database B Nominal Effort

Belgium:

Data submitted mainly for 2010. 147 records in total submitted. There were 33 records submitted with no mesh size information for trammels, gillnet and dredges. An additional submission of 441 records regarding years 2005 and 2007 – 2009 was required. Again, in this additional submission 84 records found with missing mesh size information for trammels, gillnet and otters. Specific condition reported for 2010 data was SBCIIIart5.

Denmark:

Only for 2010 reported. No updates for previous years data. In total 1042 records were submitted. There were 89 records reported with missing gear information and 32 records with no mesh size information for pots, dredges and gillnets. Specific condition reported was DEEP, CPart13, FDFBAL and FDFIIA

Estonia:

Data submitted for 2005 – 2010. Total number of records uploaded 342. Specific condition reported BACOMA.

Finland:

A number of 584 records were submitted for years 2003 – 2010. There were 80 records with missing quarter information and vessel length over 10 meters (code used 'o10m') and 16 records with area code 24-28 which is not consistent with the requirements of the data call. No mesh size information reported for any of the fleets. The sum of nominal effort of the records which are not consistent with the definitions of the data call represent almost the 50.6% of Finland's total nominal effort. The data are considered inconsistent with the format requested in the data call.

France:

Data submitted only for 2010. There were 14 records with missing area information. 168 records were reported under the SBcIIIart5 additionally for certain areas other than Bay of Biscay (8a, 8b). The specific condition was changed for these records to none. Specific conditions reported DEEP and SBcIIIart5.

The expert's group during the EWG 11-06 meeting noticed an unusual drop of the French nominal effort from 2009 to 2010. That lead to a new submission of the French nominal effort data. The updated data were used during the EWG 11-11 meeting.

Germany:

A total of 557 records were submitted only for 2010. No previous years updates. Specific conditions reported DEEP, CPart13 and BACOMA.

Ireland:

Data reported for the whole time series 2000 – 2010. In total 7162 records submitted where 26 of which presented missing gear type, 83 missing vessel length and 2028 with missing mesh size for various gears. Specific conditions reported DEEP, CPart11 and CPart13.

Latvia:

Data submitted for years 2003 – 2010. Total number of records submitted 860. Specific condition reported BACOMA.

Lithuania:

Data submitted for years 2009 – 2010. Total number of records submitted 179. Specific condition reported BACOMA.

The Netherlands:

Only for 2010 reported. No previous years updates. In total 397 records were submitted. Specific condition reported DEEP.

Poland:

Nominal effort submitted only for 2010. . No previous years updates In total, 427 records were uploaded. 54 records reported with missing mesh size information for gillnets, otters, pots, pelagic trawls and demersal seines. Specific condition reported BACOMA.

Portugal:

Data submitted for mainland and Madeira. No data for Azores. For the mainland, 1850 records submitted for years 2000 – 2010. 88 records reported with missing gear type information and 12 records for pelagic seines, trawls and dredges with no mesh size information available. Comparing to previous years submissions there are no records uploaded for areas 14b COAST, 1 RFMO, 34.1.2 RFMO, 34.2.0 EU, 5b EU, 6a. Specific conditions reported DEEP, and IIB72ab.

For Madeira, data submitted for the first time and only for 2010. The total number of records is 27 and regard area 34.1.2 RFMO. There were 4 records for pots with missing mesh size. Specific condition reported DEEP.

Scotland:

Data submitted for 2010 for all the fleets and for 2000 – 2008 for vessels under 10 meters. Regarding the 2010 submission, 828 records were uploaded where 21 records present no gear type information, 6 records no area information and 114 missing mesh size information for pots, dredges, trammels and pelagic trawls. Moreover, there were 10 records for area BSA and specific condition DEEP which were ignored in the analysis. Specific conditions reported were DEEP, FDFIIA, CPart11 and CPart13.

Regarding the update of the under 10 meters vessels for years 2000 – 2008, 922 records were submitted. 75 records reported missing information for gear type and 315 missing mesh sizes for dredges, gillnets and beams.

Spain:

No data submitted for 2010.

Sweden:

Data for years 2003 – 2010 submitted. In total 7199 records were submitted. There were 255 records with missing gear type information and 476 records for pots and gillnets with no mesh size. For 2009 new data were updated only for areas 3an, 3as and 4 which replaced the previous stored information. Specific conditions reported were BACOMA, T90, CPart11 and FDFIIA.

UK without Scotland:

Data for 2010 were submitted via email. Country codes included ENG, GBG, GBJ, NIR and IOM. A total number of 1878 records were submitted. 23 records where submitted for area BSA and specific condition DEEP which were ignored in the analysis. In addition, 245 records were submitted with missing mesh size information for pots, dredges and gillnets. Specific conditions reported were DEEP, CPart13 and FDFIIA.

Relative changes in the effort figures submitted in 2010 to those submitted in 2009 are provided in each of the effort sections relating to the various areas covered by this report. The following notes provide some Member State descriptions of data submitted to process and any changes which explain differences in effort between the 2010 submission and earlier submissions. Note that not all countries were present at the meetings and some did not provide detailed descriptions

Belgium: Belgium provided effort data (kw*days at sea) for 2003-2010 by rectangle and by quarter, for all relevant areas where the Belgian fleets are operational. Since 2003 effort (and landings) are split proportionally over the rectangles as effort became available by rectangle from logbook data. As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in area VIIIa,b were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00’ N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00’ N and 56° 00’ N and the points 55° 00’ N – 05° 00’ E and 56° 00’ N – 05° 00’ E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area’s was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

Voyage information on the national data base calculates days at sea based on the voyage start date and the voyage end date. For example, a voyage starting on one date and returning (landing) the following day will accrue 2 days at sea. Each day a vessel is at sea is counted only once with the effort details allocated according to the longest voyage on that date. Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date. Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is allocated completely to the area/gear with the longest activity that day.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. No special conditions were allocated to any Belgian fleet category until now as no Belgian vessel applied for any special condition in any year since the special conditions have been introduced.

All Belgian effort deployed within cod recovery plan areas was assigned special condition "CPother

Denmark: The National Institute for Aquatic Resources in Denmark (DTU Aqua) provided all relevant effort data for 2000-2010 for the areas: Baltic, North Sea, Skagerrak, Kattegat and Coastal and International waters in Northern Shelf in the required data format and at the required date, using the STECF-SGMOS guidelines. In 2009, major revisions had occurred in the extraction programs, due to comprehensive and iterative collaboration between DTU Aqua and the Danish Directorate for Fisheries DDF (Ministry of Food, Agriculture and Fisheries). While this led to some delays in the delivery of the final dataset, it is though considered that this process led to a considerable improvement of the data quality and consistency. As a consequence, no further improvements were required for the data provided in 2010, which are fully consistent with the 2009 dataset at the exception of minor corrections of few individual log-books records. A number of points were though underlined by the DDF with regards to the data call, including :

- There are a number of inconsistencies with regards to gear definition : The gear coding in annex 3 of the data call is not fully consistent with the gear coding of Council Regulation 1342/2008. This is the case for GILL and LONGLINE. GILL includes codes GNS and GND, however none of the two statistical codes are mentioned in 1342/2008 which only mentions GN with is a general code for Gill Nets. With regard to longlines only LL is mentioned in Regulation 1342/2008 but LONGLINE includes poles (LHP), drifting lines (LLD) etc.
- In Council Regulation 1098/2007 there are no specific gear codes mentioned, but in Council Regulation 1322/2008 (Tac and Quota for the Baltic 2009), annex 2, there are mentioned a wide range of gear which all has to have a mesh size above 90 mm. In annex 2, it is stated that drifting lines (LLD) should not be included and there is no references to drift nets.
- Denmark is not able to submit data for the Baltic in the period 2000-2010 on IBSFC areas, as mentioned in the data call. The data is not believed to be in a sufficient quality – this is the case for all IBSFC areas where a statistical rectangle is in two different IBSFC-areas and in particular statistical rectangle 39G4 where the quality of data before 2007 is in a poor quality. Therefore Denmark delivered only figures on areas 22-24 (Western Baltic) and 25-32 (Eastern Baltic). These areas are also those applied in the administrative legislation.
- There is no information in the logbook with regard to whether a vessel has applied BACOMA or T90 and the vessel is not obliged to fill in this information in the logbook. Consequently Denmark has no information with regard to Baltic Technical Conditions. Further Denmark has not yet applied article 11 and 13 in Regulation 1342/2008 and no data is reported for Cod Plan R(EC) No 43/2009. Deep-water species is defined in line with Regulation 2347/2002 which states fishing trips >= 100 kg mix of species mentioned in the regulation.

- In the Baltic, Denmark has applied the **yearly** allowed activity even though the data call states data has to be divided by quarters.
- Denmark submitted data last year based on the definition in the data call which was calendar days at sea. This is not the definition applied for administrating the regulation 1342/2008 and regulation 1098/2007. However the baseline was calculated last year with this definition and the Commission was informed of the inconsistency between the definition in the data call and the definition applied by the Danish Administration and as such the time series of the data call will not be broken.

The nominal effort is calculated on trip basis using HP registration :

Nominal effort =Max_horsepower*0,7355*Days_at_sea.

If there is no logbook, the days at sea is set to 1.

France: For France effort data from 2000 to 2008 in kW and gross tonnage days at sea were updated in the mixed fishery database after the meeting of June. These data give the number of vessels concerned in a defined area for each fishery for all gears with all mesh size ranges.

*The effort calculated in last year's report as kw*fishing hours have been corrected to kw*days at sea according to the specifications in Council Regulation (EC) N° 43/2009.*

But it appears to be significant differences between the two data sets which could be explain as follow :
Between submissions, the French national data base was updated and some changes were made, as removals of duplicate records (mainly for gillnets and trammel nets), updates of referential (vessels, mesh size). These corrections can explain the overestimation of catches and effort data computed in the first data set.

Given the incapacity to define the route of a fishing boat from the entry in the regulated area to the fishing ground, the present effort calculation is using numbers of fishing hours divided by 24 in a regulated area rounded up to number of days. This may lead to an underestimation of the fishing effort for some fleets. Only fishing trips targeting regulated species were taken into account.

Concerning data quality, data have been compiled from logbook recorded in the French national database. Data used are not completely exhaustive but the data quality has been improved since 2000. All data were provided for all area concerned by the cod recovery plan but they did not take into account limits defining waters under the sovereignty or jurisdiction of Member States as laid down in article 2a of the Amendments to Regulation (EC) No 423/2004 about geographical definition.

The special conditions have been calculated thanks to an algorithm taking into account the specific composition for each trip.

A reference table have been used to create the relationship between the mesh size recorded into the logbook and the mesh size range defined into the mixed fisheries database. When this information is missing, the missing value '-1' has been used.

Note that the French data were revised and resubmitted early in September 2011 – these changes have been incorporated in this report . It is understood further submissions were made to the Commission – these have not been incorporated here and so a discrepancy is likely.

Germany: Germany provided fleet specific effort data for 2000-2010 in the requested formats derived from official logbook data. However, data on vessels <10m in the North Sea do not cover all vessels and trips because these vessels normally do not have to fill out logbooks. Number of vessels <10m (North Sea) and <8m (Baltic) is provided in an extra data file as proxy for effort. For the Baltic, Germany has applied the yearly allowed activity and capacity even though the data call states data has to be divided by quarters. The calculation procedure follows closely the describtion in the STECF technical report "Some technical guidance towards national fleet specific fishing effort and catch data aggregation" (ISBN 978-92-79-12134-0). This implies a calculation of kw-days based on calendar days. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.1.a, 8.1.c, 8.1.d, 8.1.e and 8.1.f for the years 2000-2008. During 2000-2008, the fleets did not apply or have been eligible for other special conditions as confirmed by personal communication with the control and enforcement institute (BLE). For 2009 onwards the special conditions from the new cod management plan are used.

Ireland: Ireland provided fleet specific effort data for 2000-2010 in the requested formats, derived from the national logbook database (IFIS) for vessels ≥10 meters in length provided by the Department of Agriculture, Fisheries and Food. Vessels less than 10m in length are not required to complete logbooks, and therefore no effort is available for these vessels. Data has been provided in nominal effort as kW*days-at-sea, effective effort in kW*hours fishing, GT*days-at-sea, and vessel numbers within each category. The data covers all areas requested in the STECF SGMOS data call in which the Irish fleet is active. Effort data conforms to the requested aggregation, of quarter, area, gear, mesh size, and vessel length. Mesh size information was only available from 2003 onwards. Days-at-sea effort for 2000-2002 is presented as a calculated proxy, obtained from the average ratio of operational fishing days to days-at-sea by gear during 2003 to 2005.

Construction of days-at-sea data follows the methodology guidelines provided by the Joint Research Council at a meeting held by the Commission in February 2009 were followed. This methodology was applied to the Irish logbook data, using trip departure, operation, and landing dates to determine activities whilst away from port. Only one Gear and area combination is applied to any one vessel day. The gear and area during a trip were assumed to be known only on days where fishing operations occur. Gear and area are allocated according to daily dominant fishing activity and area. Non-fishing days at sea (inactive days away from port) during a trip have been inferred using the guidelines provided by the JRC. Gear and area of non-fishing days from departing port to the first fishing operation date are assumed to be that of the first operation. Gear and area of non-fishing days between days of fishing are assumed to be those of the later operation date. Non-fishing days from the last operation day to returning to port are assumed to be the same as the last operation.

The data call requested detailed area information (e.g. coast, RFMO, EU). It was not possible to aggregate data at this level of spatial detail. Detailed areas were assumed. Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

In relation to special conditions, between quarter 4 of 2009 and quarter 2 of 2010, 3 vessels within the TR2 category availed of additional effort under an Irish Article 13 scheme within the Irish Sea (VIIa). Effort under this scheme has been marked as

“CPart13”. Since the start of quarter 3 2010 these three vessels became exempt from the effort regulation under Article 11. This effort has been marked as “CPart11”. Additional effort was claimed under Article 13 where all TR1 vessels partook in cod avoidance schemes and operated west of the “French line” (2.d) since the start of the regulation as such, effort for all TR1 vessels within VIa has been assigned to special condition “CPart13”. All other Irish effort deployed within cod recovery plan areas since its introduction in 2009 has been assigned special condition “CPother”.

Effort data was also provided by BSA, labelled as such within the area field. It should be noted that effort from this area is also contained within the relevant ICES areas. Further more, deepwater effort has been provided, classified as “DEEP” within the special condition field. Deepwater effort was identified as those vessels carrying out individual trips retaining 100kg or more of aggregated deepwater species (Annex I of Council Regulation 2347/2002), regardless of permit status. In addition, the group agreed to include trips where the aggregated Annex I species represented greater than 35% of the total trip landings as deepwater. This effort is a duplication of effort within the relevant areas.

Latvia: Latvia provided effort data for 2003-2010 in the requested formats. The data derived from official logbooks which are stored in national data base. Latvian fishermen according to the Latvian legislation have to fill logbook for every fishing trip they make. The filled logbooks stored in the ICIS information system include information on vessel name, register number and radio signal; departure and arrival dates and time; fishing operation date and time; fishing operation coordinates; gear type used; landing per species. Effort data are aggregated on quarter, ICES Subdivisions, gear, mesh size, and vessel length segments. Nominal fleet specific effort data are presented in terms of kW*days at sea (kWdays), gross tonnage*days at sea (GTdays) and number of vessels per vessel length segments. It is planned to prepare the data for 2000-2002 in the nearest future after extraction and processing of the historical data from the old database.

Netherlands: The Netherlands attended the first of the meetings of STECF-SGRST on the assessment of fishing effort regime and attended in 2008 but was not present in 2009. IN that year, the Netherlands provided a completely reworked data set based on logbook information which was considered more reliable than the previous submissions based on VMS. According to the best information available from the Dutch Ministry, fishing effort for the Dutch fleets (2000-2010) is calculated using the guidelines of Ratz (2009).

Portugal: Portugal provided effort data for 2004-2010 (Kw*days and GT*days) by quarter and year in the required data format for the areas 8c and 9a where the Portuguese fleet operates. Numbers of vessels were not provided. The information refers to all fishing vessels with overall length ≥10 m, licensed for the period 2004-2010. The gear categories and mesh size provided were in agreement with the data call and Annex IIB, gillnet with mesh size >60mm, otter trawl with mesh size >32mm and bottom longlines. However, no mesh size information could be provided for significant parts of the fleets deploying the gears defined. In the case of trawl, the unknown mesh size means that although the mesh size is greater than 32 mm, it is not possible to specify according to the categories defined by this working group, but their effort can be taken into account. The same is not applicable to the gillnets with unknown mesh size. This resulted in a high proportion of gillnet effort which could not be assigned to the defined derogations and therefore were grouped as unknown (none). Special conditions have been provided for a mixed passive gear category (“PGP”), which includes vessels operating with more than one gear.

Although this group includes unregulated gears (trammel nets, traps, dredges, etc.) and regulated gears (longlines and gillnets) affected by the special conditions, it was not possible to consider the gear specific effort in the evaluation and they were added to “none”. The trawl fleet was further allocated to two fisheries, targeting crustaceans operating in area 9a or targeting demersal fish operating in areas 8c and 9a. Effort was computed differently for those vessels covered by the Southern Hake and *Nephrops* recovery plan which have effort limitations and other vessels. The former were computed based on logbooks information and the last based on sales notes, assuming each sale represents one fishing day.

Spain: The source of data is estimations made from logbooks (all vessels ≥10 meters). 2000 and 2001 data are not provided since they are not very reliable; logbook cover and quality were not very high in those years, these aspects have improved each year over the period since. Gulf of Cadiz was excluded through the port of landing data for Annex IIB dataset; results were successfully cross-checked with Working Group on Hake, Megrim and Monkfish information. Drift longline is an Annex IIB unregulated gear, therefore in this annex dataset is codified as gear “none”. The gear category “none” includes also and overall trolling and hand lines and “unknown gears” of which main landings are also from small pelagic and tuna. 2002-2009 kW*days and GT*days and number of vessels are provided by quarter, gear, mesh size range, area and special condition.

No data for 2010.

Sweden: Sweden provided fleet specific effort data for 2000-2010 in the requested formats derived from official logbook data bases covering all vessel ≥10m. In addition to the usual nominal effort data in kW*days at sea, the requested effort data were also available in the units of GT*days at sea and number of vessels. The latest data submission covers the areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.3.a, 8.3.b.

For vessels <10m Sweden provided total nominal effort usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea in areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.3.a, 8.3.b.

The main problem in using Swedish data analysing the use of technical regulations according to Annex 11a has been the mismatch in the introduction of a new technical measure in annex IIA and the national coding of the gear in the logbook. This has meant that the use of the special condition IIa8.3a has been assessed by other data sources than the logbook. During 2007, gear code for the 8.3 a was introduced which allowed a comparence of the data sources for 2005, and 2006.the result from this comparison showed that the other data source and the loggbok matched satisfactory. For special condition IIa8.3b there has been no such mismatch the introduction of the gear and the gear cod was introduced simultaneously.

UK England (England, Wales & Northern Ireland): provided effort data for 2000-2010. Details of the approach used to provide data is given in the Annex at the end of this note. The submission in 2009 involved revision of data. Work has been carried out to improve the linkage of activity to special conditions in light of contact with the Commission and the JRC to deal with inconsistencies and differences in interpretation of the special conditions, for example, instances where the special condition had been interpreted differently by the UK as well as instances where errors in the allocation of effort to the special conditions had occurred. In addition, the various quality initiatives introduced by the JRC in the central processing of the date reported to improve the quality of the data have been worked back to be included in the initial processing stages in the UK – for example, instances of data oddities (e.g. mesh sizes being reported for gears where meshes are not applicable such as long lines) are now detected and treated as appropriate in the compilation of data prior to submission.

In addition to the above, within the UK there have been changes to the core data source used to switch from a dedicated reference databases compiled from an aggregation of data from separate databases on activity held by the different fisheries administrations in the UK to using the IFISH UK database introduced as part of continuing development of combined data systems within the UK. This move has led to some slight changes in the data, primarily as a result of a change in the linkage to the vessel details for engine power and gross tonnage. These changes have been separately assessed and are of a minor overall impact.

UK (Scotland): UK (Scotland): Scotland provided effort data for the years 2000-2008 in the format requested in the Data call covering those years. The databases available to UK (Scotland) do not provide information on whether a vessel adopted one of the technical measures relevant to some special conditions or on special conditions requiring in-season management. Therefore, special condition designations are only entered for certain fisheries as detailed in report STECF-SGMOS-09-05. In 2009 data for 2000-2008 was aggregated according to the regulated gears set out in regulation (EC) 1342/2008 and this year the special condition codes related to those categories are included, i.e. effort in non-regulated gears or in areas outwith the Cod Recovery Zone were assigned to special condition “none”; effort inside the Cod Recovery Zone for regulated gears other than TR1 and TR2 were assigned to special condition “CPOther”; and effort in the Cod Recovery Zone for TR1 and TR2 gears was assigned to special condition “CPart13”, in reflection of the various measures under the Scottish Conservation Credits Scheme for vessels using these gear types. 63 Scottish vessels have been granted exemption under Article 11 from 1 February 2010 but there was no effort exempted under this Article in2009.

Data is compiled on a basis comparable with the information from the rest of the UK. Effort on voyages using more than one mesh size is allocated according to log book data. This affects the information for effort in the years prior to 2003, when vessels were allowed to use different mesh sizes within the same voyage. Similarly, effort on voyages fishing in more than one rectangle is allocated according to logbook data. Starting with the 2007 STECF meetings Scottish fleet effort for the other gears (dredges, pelagic seines, pots) is provided directly by UK (Scotland) on a comparable basis with that provided previously by UK (England).

In an attempt to summarise the definitions applied by member states to record various metrics of effort is given in Table 5.2.2.2. This table is under construction and will be more fully populated at the 2011 meeting of the effort group.

Table 5.2.2.2 Definitions used in the calculation and recording of effort by member state

Country	Definition used to calculate days at sea	Definition used to calculate nominal_effo	Definition used to calculate GT_days_at_sea	Apportionment of effort where activity in a voyage occurs in more than one area or uses more than one gear
Belgium	Voyage information on the national data base calculates days at sea based on the voyage start date and the voyage end date. For example, a voyage starting on one date and returning (landing) the following day will accrue 2 days at sea. Each day a vessel is at sea is counted only once with the effort details allocated according to the longest voyage on that date.	Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date.	GT_days_at_sea is calculated as the days at sea multiplied by the Gross Tonnage of the vessel at the voyage landing date.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is allocated completely to the area/gear with the longest activity that day.
Denmark	Voyage information on the national data base calculates days at sea based on the voyage start date and the voyage end date. For example, a voyage starting on one date and returning (landing) the following day will accrue 2 days at sea. If more than one voyage occurs on the same day, that day is counted only once and the effort is apportioned between the voyages	Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date.	GT_days_at_sea is calculated as the days at sea multiplied by the Gross Tonnage of the vessel at the voyage landing date.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is apportioned equally between the area/gears recorded
Estonia				
Finland				
France				
Germany	Voyage information on the national data base calculates days at sea based on the voyage start date and the voyage end date. For example, a voyage starting on one date and returning (landing) the following day will accrue 2 days at sea. If more than one voyage occurs on the same day, that day is counted only once and the effort is apportioned between the voyages	Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date.	GT_days_at_sea is calculated as the days at sea multiplied by the Gross Tonnage of the vessel at the voyage landing date.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is allocated completely to the area/gear with the longest activity that day.
Ireland	Voyage information on the national data base calculates days at sea based on the date of the voyage start and the voyage end. For example, a voyage starting on one date and returning (landing) the following day will accrue 2 days at sea. Days at sea for voyages leaving on the same date as the return of the previous voyage are adjusted down by half a day. Multiple voyages on the same date will accrue only 1 day at sea in total, with the effort details accorded as for the longest voyage that day.	Nominal effort in kwdays is calculated as days at sea multiplied by the power recorded for the vessel (in kilowatts) at the time of the data extraction.	GT_days_at_sea is calculated as the days at sea multiplied by the recorded Gross Tonnage of the vessel at the time of the data extraction.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is allocated completely to the area/gear with the longest activity that day.
Latvia	Voyage information on the national data base calculates days at sea based on the voyage start date and the voyage end date. For example: a voyage starting on one date and returning (landing) the same date will accrue 1 day at sea; a voyage starting on one date and returning (landing) the following date will accrue also 1 day at sea; If more than one voyage occurs on the same date, that day is counted only once.	Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date.	GT_days_at_sea is calculated as the days at sea multiplied by the Gross Tonnage of the vessel at the voyage landing date.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is allocated completely to the area/gear with the longest activity that day.
Lithuania				
Netherlands				
Poland				
Portugal				
Spain				
UK - England and other non-Scotland	Voyage information on the non-Scottish UK national data base, FAD, calculates days at sea based on the dates of the voyage start and the voyage end. Voyage information on the Scottish national data base, FIN, calculates days at sea as the number of 24 hour periods in the duration of the voyage, rounded up. Vessels landing into Scotland are entered onto FIN; those landing into the rest of the UK are entered into FAD. Scottish vessels landing outwith the UK are entered into FIN; Rest UK vessels landing outwith the UK are entered into FAD. Because most voyages by Rest UK vessels are entered into FAD; the calculation of days at sea is generally date based. Days at sea for voyages leaving on the same date as the return of the previous voyage are adjusted down by half a day.	Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date.	GT_days_at_sea is calculated for years from 2003 as the days at sea multiplied by the Gross Tonnage of the vessel at the voyage landing date. The information is not available on a comparable basis before 2003 because this was before the completion of the EU wide vessel gross tonnage recalibration exercise.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is apportioned equally between the area/gears recorded
UK - Scotland	See description for UK - England and other non-Scotland. Because most voyages by Scottish vessels are entered into FIN; the calculation of days at sea is generally based on the number of 24 hour periods, rounded up. Days at sea for voyages leaving on the same date as the return of the previous voyage are adjusted down by half a day.	Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date.	GT_days_at_sea is calculated for years from 2003 as the days at sea multiplied by the Gross Tonnage of the vessel at the voyage landing date. The information is not available on a comparable basis before 2003 because this was before the completion of the EU wide vessel gross tonnage recalibration exercise.	Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is apportioned equally between the area/gears recorded
Sweden				

5.2.3. Effective fleet specific effort data by rectangle 2003-2010

In order to provide spatial distributions patterns of fishing effort, SGMOS continued to use the data base structure agreed previously to collate data on effective effort in units of trawled hours by statistical rectangle for mobile gears only. The data have been made available from the national logbooks and aggregated to the regulated gear groups (derogations) defined in Annexes IIA, IIB and IIC of Council Reg. 40/2008 and the cod plan 43/2009.

The availability of the rectangle effort data requested is summarised in the following control notes (prepared by JRC) which tabulates how much data was supplied by each country and provides some quality control notes.

Table 5.2.3.1 Overview on 2003-2010 effective effort data reports (trawled hours by derogation and rectangle) provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 10/2008 and 43/2009.

Country	**Data Submission**	**First Submission (Deadline 6-May)**	**Reviewed by JRC (New deadline to upload data 20-May)**	**Last Submission**
BEL	DCF website	27-May	3-June	
DEN	DCF website	6-May	17-May	8-June
EST	DCF website	5-May	26-May	6-June
FIN	DCF website	6-May	27-May	
FRA	DCF website	17-May	30-May	5-Sept
GER	DCF website	2-May	24-May	3-May
IRL	DCF website	6-May	27-May	
LAT	DCF website	6-May	26-May	27-May
LIT	DCF website	5-May	25-May	6-May
NED	DCF website	5-May	26-May	
POL	DCF website	6-May	30-May	
POR	DCF website	6-May	26-May	11-May
SPN	none			
SWE	DCF website	6-May	26-May	
UK SCO	DCF website	12-May	31-May	14-May
UK	email	3-June	8-June	8-June

List of data deficiencies, inconsistencies and manipulation observed by JRC on database C Effective Effort

Belgium:

Data submitted only for 2010. No updates for previous years data. In total, 582 records were submitted. There were 57 records with missing mesh size information for gears such as trammels, gillnets and dredges. No specific conditions reported.

Denmark:

Only 2010 data submitted. No updates for previous years data. The number of records uploaded was 4704. There were 66 records referring to fleets with missing gear type information, 23 records with missing mesh size information for gear such as pots, gillnets and dredges and 5 records with missing rectangle information. Specific conditions reported were DEEP, CPart13, FDFBAL and FDFIIA.

Estonia:

Data for years 2005 – 2010 were submitted with a total number of records 1051. No DEEP records reported in contrast to the Nominal Effort Table B. The reason is that Estonian authorities do not record distant fleet effort by rectangle (i.e. 48H5). Specific condition reported was only BACOMA.

Finland:

A number of 585 records were submitted for years 2003 – 2010. No rectangle information reported for any of the records submitted. Rectangle information is mandatory in order to perform analysis on spatial effort. The data are considered to be inconsistent with the format requested in the data call.

France:

Data only for 2010 submitted. No updates for previous years data. In total, 10711 records were uploaded. There were 14 records with missing area information, 655 records with missing rectangle information, 472 for pots with no mesh size information and 57 records for area BSA and specific condition DEEP which were ignored in the analysis. Specific conditions reported were DEEP and SBcIIIart5.

A new submission of the French effective effort data was made before the EWG 11-11 meeting due to the identification of several errors in the data set used in EWG 11-06 from the French authorities.

Germany:

Only for 2010 reported with a number of 2152 records submitted. No updates for previous years data. Specific conditions reported DEEP, CPart13 and BACOMA.

Ireland:

Data submitted for 2003 – 2010 years. There were 26475 records uploaded. 20 records found to have missing gear type information, 48 with missing vessel length information and 3610 with missing mesh size for certain types of gears. Specific conditions reported DEEP, CPart11 and CPart13.

Latvia:

Data submitted for 2003 – 2010 years and were in total 2448. Specific condition reported BACOMA.

Lithuania:

Data submitted for years 2009 – 2010. Total number of records submitted 292. Specific condition reported BACOMA.

The Netherlands:

Only for 2010 reported with a total number of records 1880. No updates for previous years data. A record for 2009 was identified among the dataset and deleted after contacting the national correspondent since it was related to a trip that started in 2009 and ended in 2010. Specific condition reported DEEP.

Poland:

Only 2010 data submitted. No updates for previous years data. The number of records uploaded was 1038. There were 172 records for gillnets, otters, pelagic trawlers, demersal seines and pots with missing mesh size information. Specific condition reported BACOMA.

Portugal:

Data submitted for mainland and Madeira. No data for Azores. For the mainland, 7503 records submitted for years 2003 – 2010. 453 records reported with missing gear type information and 11 records for pelagic seines and dredges with no mesh size information available. Comparing to previous years submissions there are no records uploaded for areas 14b COAST, 34.2.0 EU, 34.1.2 RFMO, 6a, 5b EU. Specific conditions reported DEEP, and IIB72ab.

For Madeira, data submitted for the first time and only for 2010. The total number of records is 23 and regard area 34.1.2 RFMO. Specific condition reported DEEP.

Scotland:

Data submitted for 2010 for all the fleets and for 2000 – 2008 for vessels under 10 meters. Regarding the 2010 submission, 5794 records were uploaded where 104 records present no gear type information, 7 records no area information and 906 missing mesh size information mainly for pots and dredges. Moreover, there were 80 records for area BSA and specific condition DEEP which were ignored in the analysis. Specific conditions reported were DEEP, FDFIIA, CPart11 and CPart13.

Regarding the update of the under 10 meters vessels for years 2000 – 2008, 3276 records were submitted. 336 records reported missing information for gear type and 1409 missing mesh sizes for dredges, pots and otters.

Spain:

No data submitted for 2010.

Sweden:

Data submitted only for 2010. No updates for previous years data. In total the number of records was 2115. There were 41 records with no gear information and 85 records for pots and dredges with no mesh size information. Specific conditions reported were FDFIIA, CPart11, BACOMA and T90.

UK without Scotland:

In total 6733 records were submitted for 2010 only. No updates for previous years data. In the initial submission 50 duplicated records were identified and corrected during the meeting after contacting the national correspondent. There were also 1024 records for pots and dredges with missing mesh size information and 134 records for area BSA and specific condition DEEP. Specific conditions reported were DEEP, CPart13 and FDFIIA.

The following notes provide Member State descriptions of the data submitted

Belgium: Belgium provided effective effort by ICES statistical rectangle in units of hours trawled for the period 2003-2010, derived from the official logbook databases for all vessels ≥10 meters. The data covers all areas in which the Belgian fleets are active and conforms to the requested aggregation, by quarter, area, gear and mesh sizes. No spatial effort information is available for vessels less than 10m in length.

Trawled hours were calculated by summing fishing time to the aggregation level requested in the data call. To ensure consistency between datasets, the same base operational logbooks data was used as for the aggregation of days-at-sea effort.

As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in the Bay of Biscay (VIIIa,b) were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00' N and 56° 00' N and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. No special conditions were allocated to any Belgian fleet category until now as no Belgian vessel applied for any special condition in any year since the special conditions have been introduced.

All Belgian effort deployed within cod recovery plan areas was assigned special condition "CPother".

Denmark: Denmark provided effort data by rectangle for 2003-2010, with the same gear and mesh sizes categories and including the same derogations as for nominal effort data (kW*days, see Sec. 5.5.2). Fishing hours are not registered in Danish logbooks, and were thus back calculated from the information of fishing days. Fishing days are calculated as the number of days with registered catches by ICES square by trip. For short trips (where fishing days*24 is larger than numbers of hours at sea (arrival time – departure time), hours by square = Hours at sea * Fishing days by square / total fishing days by trip. For long trips (where fishing days*24 is lower or equal than numbers of hours at sea, hours by square = fishing days * 24.

France: France updated effective effort data in kW*days GT*days and numbers of boats for the period 2000-2010. These data were provided by rectangle and by quarter, for all areas in the request format taking into account derogations defined in Annex 2a of the Council Reg. 40/2008. These data are available from logbooks and give the number of hours trawled for each fleet.

Germany: Germany aggregated the effective effort in units of trawled hours deployed by vessels. As requested, this data submission utilised ICES statistical rectangles. The information on trawled hours from logbook data, however, are suspected to be rather uncertain. Describtions for data on <10m, <8m vessels and special conditions from part B also apply to part C.

Ireland: Ireland provided effective effort by ICES statistical rectangle in units of hours trawled for the period 2003-2010, derived from the national logbook database (IFIS) for vessels ≥10m in length provided by the Department of Agriculture, Fisheries and Food. No spatial effort information is available for vessels less than 10m in length. This has been provided in the requested formats for demersal trawled gears, i.e. beam trawls, otter trawls, and demersal seines. Data has been aggregated by year, quarter, vessel length, and gear for all areas detailed in the STECF SGMOS data call in which the Irish fleet is active. Trawled hours were calculated by summing fishing time to the aggregation level requested in the data call. To ensure consistency between datasets, the same base operational logbooks data was used as for the aggregation of days-at-sea effort.

The data call requested detailed area information (e.g. coast, RFMO, EU). It was not possible to aggregate data at this level of spatial detail. Detailed areas were assumed. Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

In relation to special conditions, between quarter 4 of 2009 and quarter 2 of 2010, 3 vessels within the TR2 category availed of additional effort under an Irish Article 13 scheme within the Irish Sea (VIIa). Spatial effort under this scheme has been marked as "CPart13". Since the start of quarter 3 2010 these three vessels became exempt from the effort regulation under Article 11. This effort has been marked as "CPart11". Additional effort was claimed under Article 13 where all TR1 vessels partook in cod avoidance schemes and operated west of the "French line" (2.d) since the start of the regulation as such, effort for all TR1 vessels within VIa has been assigned to special condition "CPart13". All other Irish effort deployed within cod recovery plan areas since its introduction in 2009 has been assigned special condition "CPother".

Effort data was also provided by BSA, labelled as such within the area field. It should be noted that effort from this area is also contained within the relevant ICES areas. Furthermore, deepwater effort has been provided, classified as "DEEP" within the special condition field. Deepwater effort was identified as those vessels carrying out individual trips retaining 100kg or more of aggregated deepwater species (Annex I of Council Regulation 2347/2002), regardless of permit status. In addition, the group agreed to include trips where the aggregated Annex I species represented greater than 35% of the total trip landings as deepwater. This effort is a duplication of effort within the relevant areas.

Latvia: Latvia provided effective fleet specific effort data for the period 2003-2010. These data are available from logbooks which are stored in national data base. Effective fleet specific effort data were presented by ICES rectangles and expressed in hours fished for the Baltic Sea ICES Subdivisions by quarter, gear, mesh size, and vessel length segments in the requested format.

Netherlands: The Netherlands provided effective effort (in units of fishing hours) by rectangle, as requested in the official data call. According to the best information available from the Dutch Ministry, fishing effort for the Dutch fleets (2000-2010) is calculated using the guidelines of Ratz (2009).

Portugal: Portugal provided effective effort data by statistical rectangle in hours fished.

Spain: Spain did not provide effective effort data by statistical rectangle.

Sweden: Sweden provided effort data by rectangle for 2003-2010, with the same gear and mesh sizes categories and including the same derogations as for nominal effort data (see sec. 5.5.2). The effort data are expressed as hours fishing per trip and vessel /Ices square, based on the set position of the gear. The data could overestimate the hours spent /Ices square since the fishing operation to a large extent could have been performed in neighbouring Ices rectangles.

UK England: England provided effort by ICES statistical rectangle data for the years 2003-2010. It was not possible to provide trawled hours data however. This is because hours trawled is not a mandatory field in the fishers' logbooks and is therefore not necessarily completed. Instead, the data used to provide nominal effort (see section 5.5.2) is held on a statistical rectangle basis by UK (England). This data was simply multiplied by 24 to get a measure of fishing effort expressed in hours.

UK (Scotland): UK (Scotland): UK (Scotland): Scotland provided effort by ICES statistical rectangle data for the years 2003-2010. It was not possible to provide trawled hours data however. This is because hours trawled is not a mandatory field in the fishers' logbooks and is therefore not necessarily completed. Instead, the data used to provide nominal *effort* (see section 5.5.2) is held on a statistical rectangle basis by UK (Scotland). This data was simply multiplied by 24 to get a measure of fishing effort expressed in hours. As for the nominal fleet specific effort data, new special conditions apply in 2009.

5.2.4. Fleet specific landing and discard data 2003-2010

The availability of the requested fleet specific catch and discard data is summarised, by Member State in the Table 5.2.4.1. According to the experts, none of the national data bases includes unallocated landings. Not all Member States provided landings, discards and biological data from all species requested, so only anglerfish, cod, haddock, whiting, saithe, hake, plaice, sole, mackerel, horse mackerel, blue whiting, rays, penaeid shrimps and *Nephrops* are considered in the analyses conducted. Overall, the landings figures compiled in the data base are consistent with the officially reported landings of the stocks considered in the analyses. Some Member States again did not provide essential quality parameters of the data. Consequently, EWG-11-11 remains in a poor situation regarding the description of the quality of the fleet specific estimates of discards and age disaggregated catches, mainly due to lack of requested information (no. of discard samples, fish measured and aged). The availability of the catch (landings and discards) data requested is summarised in the following control notes (prepared by JRC) which tabulates how much data was supplied by each country and provides some quality control notes.

Table 5.2.4.1 Overview on 2003-2010 catch data reports (landings and discards) provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 10/2008 and 43/2009.

Country	**Data Submission**	**First Submission (Deadline 6-May)**	**Reviewed by JRC (New deadline to upload data 20-May)**	**Last Submission**
BEL	DCF website	31-May	3-June	
DEN	DCF website	6-May	17-May	9-June
EST	DCF website	5-May	26-May	6-June
FIN	DCF website	6-May	27-May	
FRA	DCF website	16-May	30-May	5-Sept
GER	DCF website	3-May	24-May	4-May

IRL	DCF website	6-May	27-May	9-June
LAT	DCF website	6-May	26-May	27-May
LIT	DCF website	5-May	25-May	6-May
NED	DCF website	5-May	26-May	3-June
POL	DCF website	6-May	30-May	
POR	DCF website	6-May	26-May	8-June
SPN	None			
SWE	DCF website	5-May	26-May	6-May
UK SCO	DCF website	12-May	31-May	6-June
UK	DCF website/email	3-June	8-June	19-Sept

List of data deficiencies, inconsistencies and manipulation observed by JRC on database A Catch

Belgium:

A total number of 1461 records were submitted only for 2010. No updates for previous years data. There were 134 records with missing mesh size information for gear types such as trammels, dredges and gillnets. Moreover, 334 records regard species that are not requested in the official data call, like BLL, RJN, RJM, RJC and RJH. No specific conditions submitted.

Denmark:

A total number of 12288 records were submitted only for 2010. No updates for previous years data. There were 674 records with missing gear type information. In addition, there were 48 records with missing mesh size information for gear types such as pots, dredges and gillnets. Specific conditions reported are DEEP, CPart13, FDFBAL and FDFIIA.

Estonia:

Data for 2005 – 2010 years were submitted, in total 1967 records. 1255 records for vessels smaller than 12 meters were submitted with invalid mesh size range codes. These records cannot be used in the analysis of landings and discards since the information required is mesh size specific. According to the Estonian national correspondent the fishermen are not oblige to record the mesh size in coastal fisheries in accordance with the mesh size ranges of data call and the data is only partially recorded in the Estonian Information System. Due to this the mesh sizes used in small vessel groups (up to 12m) are approximate and presented using the best knowledge we have about the used mesh sizes in this fishery. Discards reported mainly for FLX species. Specific conditions reported are DEEP and BACOMA.

Finland:

A number of 3392 records were submitted for years 2003 – 2010. There were 326 records with missing quarter information and vessel length over 10 meters (code used ‘o10m’) and 79 records with area code 24-28 which is not consistent with the requirements of the data call. No mesh size information reported for any of the fleets. The sum of landings of the records which are not consistent with the definitions of the data call represent almost the 93.6% of Finland’s total landings. Few discard figures reported but no additional biological information. Hence, the data are considered inconsistent with the format requested in the data call.

France:

Data only for 2010 were submitted. No updates for previous years data. The total number of records submitted was 20841. There were 2 resubmissions in total due to errors in the data submitted by the French data provider. There were 31 records with missing area information and 529 records for pots with missing mesh size information. No age composition information reported. Specific conditions reported DEEP and SBcIIIartc5.

A new submission of the French catch data was made before the EWG 11-11 meeting due to the identification of several errors in the data set used in EWG 11-06 from the French authorities.

Germany:

A total number of 3143 records were submitted only for 2010. No updates for previous years data. However, 160 records of the total were submitted via email for vessels under 8 and 12 meters and area 4. 248 records have missing mesh size information for pots, gillnets and beams.

Ireland:

Data for 2003 – 2010 were submitted. The total number of records submitted was 59679. There was one resubmission due to errors detected in discards reported for 2010. These errors were identified during the experts meeting. There were 1128 records with missing gear information and 5745 records with missing mesh size information for vessels under 10 meters that use pots or dredges. Specific conditions reported DEEP, CPart11 and CPart13.

Latvia:

Landings and discards submitted for the whole time series, 2003 – 2010. In total 1826 records were submitted. 664 records regard species that are not requested in the official data call, FLE and ELP. Specific condition reported BACOMA.

Lithuania:

The total number of records submitted was 247 mainly for years 2009 and 2010. However, there are 19 records that updated the catch data for area 26 and for years 2005 – 2008. Discards only for COD were provided. Specific condition reported BACOMA.

The Netherlands:

The total number of records submitted was 1420 only for 2010. No updates for previous years data. There were 64 records with missing mesh size information for gear types such as pots, gillnets, pelagic seines and trammels. 12 records with mesh size 40846 replaced with 10-30. DEEP records submitted but only for 2010.

Poland:

Only year 2010 reported. No updates for previous years data. The total number of records submitted was 1783. There were 183 records with missing mesh size for gillnets, otters, pelagic trawls, demersal seines and pots. Only 11 records with discards reported and only for COD. Few records with age composition were submitted. Specific condition reported BACOMA.

Portugal:

Data submitted for mainland and Madeira. No data for Azores. For the mainland, 15232 records submitted for years 2003 – 2010. One resubmission needed during the experts' meeting to include discards information. Only 147 records reported with discards for HKE. No age composition information. Moreover, 1516 records reported with missing gear type information and 17 records for pelagic seines and dredges with no mesh size information available. Comparing to previous years submissions there are no records uploaded for areas 14b COAST, 2 RFMO, 5b EU, 6a, 34.1.2 RFMO Specific conditions reported DEEP, and IIB72ab.

For Madeira, data submitted for the first time and only for 2010. The total number of records is 376 and regard area 34.1.2 RFMO. No discard information provided. There were 14 pots with missing mesh size and 285 records for species not requested in the data call. Specific condition reported DEEP.

Scotland:

Data submitted only for 2010. No updates for previous years data. Number of records submitted was 7286. 51 records found with missing gear type information, 65 records with missing area information, 1056 for species not requested in the data call, 135 records with area BSA and specific condition DEEP which were not included in the analysis. Moreover, 434 records were submitted with no mesh size information for pots, dredges and otters. The experts identified erroneous records present with discards from Scotland for areas 7a – 7k. The discards where updated to -1. Specific conditions reported were DEEP, FDFIIA, CPart11 and CPart13.

During the meeting an additional submission of 3946 for vessels smaller than 10 meters and for years 2003 – 2008 took place. 188 records found with no gear information, 3 with no area, 964 for species not requested in the data call and 964 records with no mesh size information for pots, dredges, otters and gillnets.

Spain:

No data submitted for 2010.

Sweden:

Only year 2010 reported. No updates for previous years data. A total number of 4071 was submitted with 177 records for pots and gillnets (mainly) without mesh size information and 59 without gear type information. Specific conditions reported were BACOMA, T90, CPart11 and FDFIIA.

UK without Scotland:

Data for 2010 were submitted via email and updated to include discards during the experts' meeting. Country codes included ENG, GBG, GBJ, NIR and IOM. A total number of 17166 records were submitted. There were 997 with missing mesh size information and 314 records with a combination of DEEP specific condition and BSA area which were ignored during the analysis. Specific conditions reported were DEEP, CPart13 and FDFIIA.

A new submission of the UK catch data was made before the EWG 11-11 meeting due to the identification of several errors in the data set used in EWG 11-06 from the UK experts.

The following are Member State descriptions of data submitted.

Belgium: Belgium provided fleet specific landings data for 2003-2010 derived from official logbook databases for all vessels ≥10 meters. The data covers all areas in which the Belgian fleets are active and conforms to the requested aggregation, by quarter, area, gear and mesh sizes.

The species provided are: anglerfish, brill, cod, dab, haddock, hake, lemon sole, Nephrops, plaice, saithe, pollack, sole, skates and rays, turbot and whiting. The age composition on landings for sole and plaice in ICES subdivisions IV, VIIa, VIId, VIIfg and sole in subdivision VIIIab have been provided by quarter for the Belgian beam trawlers. The total number of samples, as well as numbers aged and length measurements by quarter have been apportioned in the same ratio as total quarterly beam trawl fleet landings to annual landings.

Discard data for 2004-2010 were provided from the Belgian Beam trawl fleet for the following species: anglerfish, brill, cod, dab, haddock, hake, lemon sole, plaice, saithe, sole, skates and rays, turbot and whiting. The areas covered are 4, 7a, 7d, 7e, 7f, 7g, 8a and 8b. Belgian discard data represent all ages without disaggregation by age. Information by area for all observer-trips during the year has been merged together, giving an annual percentage of discards estimate per species. The annual estimates of discard rate have been assumed to apply in each of the 4 quarters.

There is no information on misreporting. The landings in the database are based on combined information of logbook data and sale slips. The actual landed weight is split according the logbook information on hours fished in the respective rectangles.

As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in the Bay of Biscay (VIIIa,b) were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00’ N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00’ N and 56° 00’ N and the points 55° 00’ N – 05° 00’ E and 56° 00’ N – 05° 00’ E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area’s was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. No special conditions were allocated to any Belgian fleet category until now as no Belgian vessel applied for any special condition in any year since the special conditions have been introduced.

Denmark: Denmark provided quarterly landings data for 2002-2010 for the areas North Sea, Skagerrak and Kattegat in the required data format, and covering 39 species. The Danish data include all trip information from vessels both above 10 m (with mandatory logbook submission) and below 10 m (with declarations of fishing area ("farvandseklæring") and being allocated an effort of 1 (one) fishing day. Landings information comes from the sale slips register. Age distribution data were provided for cod, haddock, plaice, sole and saithe 2003-2010. Numbers of samples for landings by species/fishery were provided according to the requirement. Discards data were provided for Kattegat, Skagerrak and North Sea. However, the Danish discards sampling program is structured according to national fisheries definitions, which do not cover the same level of precision as landings data with regards to mesh size (categories available are Danish Seine, *Nephrops* trawl and Demersal trawl). The number of samples within each stratum is considered too low to be further broken down to the requested mesh sizes categories. Therefore the Danish discards data were not included in the database. There is no quantitative information on misreporting,

France: Landings data by derogation to the mixed fishery database from 2000 to 2010 were updated for all areas, species and gears. Data by age has been provided for whiting and saithe for the same period.

Discards samples have not been raised to the total French fishery. The level of sampling being rather weak for most of the fishery and the variability high from one trip to another, it has not been possible so far to raise the samples to the total fishery.

***These results are to be treated with caution at the present time considering the high degree of uncertainty arising from the low sampling level**.* Furthermore, these results do not take into account the possible differences between metiers.

Germany: Fleet specific landings and estimated discard data were provided for 2003-2010 derived from official logbook data covering all vessels ≥10m for the years 2003-2010. For 2003 to 2008 data are not split in vessel length categories as outlined in the data call for the North Sea area. For the Baltic information for vessels >=8m is provided and for the vessel length categories outlined in the data call. For 2009 also some information for vessels <10m in the North Sea are provided. These information, however, do not cover all vessels in this category as logbooks are not mandatory for these vessels. An extra table is provided for vessels <10m (North Sea) and <8m (Baltic) based on landings declarations from these vessels in a more aggregated format. All data provided do not include unallocated landings. The estimation of discards is based on about 20-30 observer trips per year and the ratio between observed catch and discard weights (sec 5.6). Age compositions of the landed or discarded catches are given where data were available. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.1.a, 8.1.c, 8.1.d, 8.1.e and 8.1.f for the years 2003-2008 and species requested. During 2000-2008, the fleets did not apply or have been eligible for other special conditions as confirmed by personal communication with the control and enforcement institute (BLE). For 2009 onwards the special conditions from the new cod management plan are used.

Ireland: : Ireland provided fleet specific landings data for 2003-2010 derived from declared landings within the national logbook database (IFIS) for all vessels ≥10 meters in length provided by the Department of Agriculture, Fisheries and Food. Operational landings information was used in order to provide landings data within the Biologically Sensitive Area (BSA) as requested within the data call. Landings for vessels under 10 meters are not required to complete logbooks. Landings data from these vessels are obtained from monthly reports. These reports provide the species live weight by ICES area landed into ports each month. No vessel, gear, or effort information is recorded. There is some doubt as to the accuracy of these monthly reports. The data covers all areas requested in the STECF SGMOS data call in which the Irish fleet is active. All species requested by the group landed by Irish vessels have been included. The landings data conforms to the requested aggregation, of quarter, area, gear, mesh size, and species.

The data call requested detailed area information (e.g. coast, RFMO, EU). It was not possible to aggregate data at this level of spatial detail. Detailed areas were assumed. Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

In relation to special conditions, between quarter 4 of 2009 and quarter 2 of 2010, 3 vessels within the TR2 category availed of additional effort under an Irish Article 13 scheme within the Irish Sea (VIIa). Catch under this scheme has been marked as "CPart13". Since the start of quarter 3 2010 these three vessels became exempt from the effort regulation under Article 11. This catch has been marked as "CPart11". Additional effort was claimed under Article 13 where all TR1 vessels partook in cod avoidance schemes and operated west of the "French line" (2.d) since the start of the regulation as such, catches for all TR1 vessels within VIa has been assigned to special condition "CPart13". All other Irish effort deployed within cod recovery plan areas since its introduction in 2009 has been assigned special condition "CPother".

Landings information was also provided by BSA, labelled as such within the area field. It should be noted that landings from this area are also contained within the relevant ICES areas. Furthermore, deepwater landings have been provided, classified as "DEEP" within the special conditions field. Landings were identified as deep when vessels carrying out individual trips retained 100kg or more of aggregated deepwater species (Annex I of Council Regulation 2347/2002), regardless of permit status. In addition, the group agreed to include trips where the aggregated Annex I species represented greater than 35% of the total trip landings as deepwater. These landings are a duplication of landings within the relevant areas.

There is no quantitative information on misreporting. Revisions have been made to the 2003-2009 data provided to STECF-SGRST in 2009. These revisions result from an improvement in linking biological data with logbook data. As well as data availability updates and database improvements.

Irish biological landings information (age, lengths, and weights), data was extracted from the Irish port sampling database (STOCKMAN). Gear mesh size is not recorded in the STOCKMAN database, however the vessel name, landings date, gear and area are. With this information it was possible to re-construct the mesh size data from the logbooks database. If a trip uses multiple mesh range classifications, the biological data for that sample is discounted when it is not possible to identify which mesh range was sampled. However, this affects only a very small number of samples.

Samples are raised to the landings using the sample weights. The sample weights were estimated using length-weight relationships for each species (estimated for all quarters and areas within each year). Numbers-at age were estimated by applying age-length keys (ALKs). The ALKs are built up from aged fish from the relevant year, quarter and division. Gear and vessel parameters are not considered. Length classes with missing ages were filled in firstly by checking for data in different quarters (within a division), next by checking for data in different division (within a quarter) next by checking for data in different divisions and quarters and if gaps still exist they are filled using an automatic procedure based on methods described in Gerritsen et al. (2006). This filling-in of gaps in the ALK is fully automatic and may not be appropriate in all cases (e.g when there are differences between areas or quarters or when age data are very sparse). The aged sample numbers given are the number of fish used for the ALK (excluding the individuals that were used to fill in gaps).

Discards and biological discard information were extracted from the Irish discard database. To ensure consistency with landings information, technical details (including mesh size) of discard observer trips were re-constructed from the logbooks database.

Discard length frequency distributions for each species are raised in a number of steps: 1) Raising to the haul level by estimating the sample weight from fixed length-weight relationships for all species in the sample and using the skipper's estimate of the total catch weight. 2) Raised to the trip level, using the number of hauls that were sampled over the total number of hauls of that trip as a raising factor. 3) Raising to the division/gear/mesh/quarter classification using the total number of trips in each classification. Again, when a trip covers more than one classification, each classification will count as one trip.

Numbers-at age were estimated by applying age-length keys (ALKs). The ALKs are built up from aged fish from the relevant year, quarter and division. Gear and vessel parameters are not considered. Length classes with missing ages were filled in using an automatic procedure based on methods described in Gerritsen et al. (2006). This filling-in of gaps in the ALK is fully automatic and may not be appropriate in all cases (e.g. when there are very few age data). If no individual weight data was available, the discard weight was estimated from the raised length frequency distribution using a fixed length-weight relationship for each species.

Reference

Gerritsen, H.D., McGrath, D. and Lordan, C., 2006. A simple method for comparing age-length keys reveals significant regional differences within a single stock of haddock (*Melanogrammus aeglefinus*). ICES J. Mar. Sci., 63(3): 1096-1100.

Latvia: Latvia provided quarterly landings data for 2003-2010 derived from official logbooks which are stored in national data base for all vessels ≥ 12 meters for the Baltic Sea in the required data format. The data do not include unallocated landings. Estimated discard data were provided for 2003-2010. The estimation of discards is based on about 40-60 observer samples per year and the ratio between observed catch and discard weights on the basis of discard samples.Fleet segments with total overall length u8m, o8t10m and o10t12m are engaged in coastal Fishery. "Coastal fishery logbook" before 2009 are not linked to the vessels, but to fishing company or individual fisherman, so the data concerning the landings for segments less than 12m in coastal fishery can't be divided by vessels and the data can't be provided by requested format. The data on this vessel category (less than 12m in coastal fishery) may be provided without division by fleet segments.

Netherlands: The Netherlands supplied landings data for quarters 1 to 4 in 2010 for 39 species in 22 different SGDFF areas. Data for all three vessel length categories were supplied (u10m, 10m-15m, and o15m) where possible for all métiers in the Dutch fleet. Numbers at age by sex, weight at age, length at age data were supplied for sole, plaice, turbot, brill, cod, herring, mackerel, blue whiting and horse-mackerel since comprehensive market sampling programs exist for these species only. In the Dutch market sampling program ages are sampled directly. Every fish in every sample is both weighed and aged. Sampling is stratified only by market category if applicable (ie. applicable if species are sorted into market categories at auction prior to sampling taking place). Trips are sampled at random from the population of trips with landings. The observed mean weights and proportions at age in the samples per market category are used for raising. The total numbers of landed individuals are estimated to be the ratio of the total landed weight (at each market category) over the mean weight of a fish in the samples (for each market category) and the proportions at age in the samples are used directly to estimate the proportions at age in the landings. Discard numbers at age, mean weight at age, and mean length at age (raised to landings) were supplied for sole and plaice for large (over 15m) beam trawlers working 80-89mm mesh.

Portugal: Portugal provided landings data for 2004- onwards by quarter and year in the required data format for the areas 8c and 9a where the Portuguese fleet operates. Portugal did not provide discards data due to difficulties with the estimation procedure and the short time period of the discards sampling program. Age disaggregated landings were provided for hake, as well as for horse mackerel, mackerel, Spanish mackerel and blue whiting. The information refers to all fishing vessels with overall length ≥10 m, licensed for the period 2004-2006. The gear categories and mesh size provided were in agreement with the data call and Annex IIB, gillnet with mesh size >60mm, otter trawl with mesh size >32mm and bottom longlines. However, no mesh size information could be provided for significant parts of the fleets deploying the gears defined and contributing significantly to both hake and *Nephrops* landings. In the case of trawl, the unknown mesh size means that although the mesh size is greater than 32 mm, it is not possible to specify according to the categories defined by this working group, but their landings can be taken into account. The same is not applicable to the gillnets with unknown mesh size. This resulted in a high proportion of gillnet landings which could not be assigned to the defined derogations and therefore were grouped as unknown (none). Special conditions have been provided for a mixed passive gear category ("PGP"), that includes vessels that operate with more than one gear. Although this group includes unregulated gears (trammel nets, traps, dredges, etc.) and regulated gears (longlines and gillnets) affected by the special conditions, it was not possible to consider the gear specific landings in the evaluation and they were added to "none". The trawl fleet was further allocated to two fisheries, targeting crustaceans operating in area 9a or targeting demersal fish operating in areas 8c and 9a.

Spain: The source of data is estimations made from logbooks (all vessels ≥10 meters). 2000 and 2001 data are not provided since they are not very reliable; logbooks cover and quality were not very high in those years, these aspects have improved each year along the period. Gulf of Cadiz was excluded through the port of landing data for Annex IIB dataset; results were successfully cross-checked with Working Group on Hake, Megrim and Monkfish information. Drift longline is an Annex IIB unregulated gear, therefore in this annex dataset is codified as gear "none". The gear category "none" includes also and overall trolling and hand lines and "unknown gears" of which main landings are also from small pelagic and tuna. 2002-2009 landings and 2003-2009 discards data are provided by quarter, gear, mesh size range, area and special condition.

In some cases, a part of the landings of a species could be included in logbooks in its genus or family category (*Argentina spp, Lamna spp, Molva spp, Scomber spp., Squalus spp and Thunnus spp*) and that information keeps hidden. In a list of cases the requirement asks for a species of a genus when the main species of that genus in ICES Divisions 8c and 9a is other (*Argentina sphyraena, Galeus melastomus, Microstomus achne, Trisopterus luscus and Urophycis chuss*). Only the species of the requirement are presented.

2003-2008 discards have been raised again to the new landings data set. For 2009 discard quarterly effort estimation was used for raising purpose. Discard estimation 2003-2008 were raised by landings, as commonly was practiced till 2008 in Spanish discard raising procedure, while since 2009 discards data were raised by effort due to 2007 ICES WKDRP recommendation and to the métiers effort values availability. Empty cell in discards means “no information”, zero in the cell means that that stratum has been sampled and the discard obtained is zero. In order to raise 2003-2009 discards data, landings were split by métier where it was necessary (determined species and quarters) using the information obtained in the discard sampling program. So, bottom trawl was divided in métier “baca” (OTB-MIX-DEM-8c9aN), that targets demersal species, métier “jurelera” (OTB-HOM-8c9aN), that targets basically horse mackerel, and métier “pair bottom trawl” (PTB-WHB-8c9aN), that targets blue whiting and hake. Normally discard sampling is designed (and discard information raised) by year and metier (8c + 9a) level, not at quarter and ICES Division level, that is the reason why discards weights could be different from those presented in other forum (e.g. 2010 hake benchmark). The division of fleet in special conditions or not is not taking into account either in the discard sampling design due to no available information. Discards information for gillnet is available only for 2008 and 2009 in 8c ICES Division in quarters 3 and 4. As mentioned, 2003-2008 discards data were raised by landings, while 2009 discards data were raised by effort. The result of this process provided discard data with huge fluctuations, therefore discard data were deleted. 2002-2009 8c and 9a otter hake discards were calculated with 2010 ICES WGHMM respective discard rates.

Numbers at age are not provided for hake and Norway lobster since there is no consensus nowadays about their age reading (see February 2010 STECF Hake Benchmark and 2009 ICES WGHMM). Numbers at age are provided for anchovy, blue whiting and mackerel for 2003-2008. Numbers at age are not provided for anglerfish, megrims and horse mackerel. There is no consensus about anglerfish age reading (see ICES 2009 WGHMM). Respect to megrims and horse mackerel, the requirement asks for the information at genus level, so numbers at age for those species are not provided. The age sampling is not designed by the strata of special condition, since nowadays we do not know from what vessel the otoliths come. Numbers at age are provided for anchovy, blue whiting and mackerel for landings and discards for the gears in which these species are more important. There are no ages for those species for 2009 because their assessment WGs are in June and their data are not made yet. There is no information about anchovy in 2007, 2008 and 2009 since the fishery was closed. Numbers at age are not provided for hake, Norway lobster and anglerfish because there is no consensus about their age reading. Numbers at age are not provided for megrims and horse mackerel, since the requirement asks for the information at genus level for those groups and age information is species level information.

NO_SAMPLES_LANDINGS is the number of length samples and NO_SAMPLES_DISCARDS is the number of sampled trips, therefore both data were not added in NO_SAMPLES_CATCH. The NO_AGE_MEASUREMENTS_DISCARDS is “-1” since there are not specific discards age-length keys. Regulation states that otoliths from discards must be collected when discards individuals have a length that is not represented in landings length distribution. In the case of horse mackerel, landings and discards have the same length distribution. In the case of mackerel is not possible for the observer to make a correct collection of discard otoliths on board (make the assembly in Eukitt and drying).

No data for 2010.

Sweden: Sweden provided catch data in the required data format for cod, *Nephrops* and plaice for the years 2003-2008, by quarter, for the areas: Skagerrak and Kattegat. However, as the by-catch data for other species could not be identified by quarter, all Swedish catches were assigned to be taken during the first quarter. STECF-SGRST notes that this data manipulation prevents any analyses by quarter. Age distribution data were provided for cod, plaice and *Nephrops* (both for the retained and the discarded part of the catch). Data for special conditions were available only for special condition IIA81b in Skagerrak for 2004, 2005, 2006 . The gear categories used for are otter trawl 90-99mm, split into *Nephrops* - demersal fish and *Nephrops* trawl with sorting grid (IIA83b). For 2006 data covered the gear category of gill nets of the mesh size range 110-149mm. Mesh sizes were stratified according to requirements. No catch data were provided for vessels <10m. In Sweden, landings of cod were prohibited during parts of 2003, 2004, 2005 and 2006 which resulted in discard of adult cod. There is no information on misreporting.

In 2007, Sweden provided catch data for the special condition aiii AII 83a, (90 mm trawl with 120 mm square mesh panel).

UK (England, Wales and Northern Ireland): The raising procedure used by the UK (England, Wales and Northern Ireland) for 2008 has changed significantly from previous years and data have been reworked for the entire period of 2002-2008.

Landings and effort data were retrieved by The UK Marine Fisheries Agency (MFA) on a year, quarter, species, area, gear, mesh, special condition basis. Length compositions for the landings and discards came from the discard sampling. Comparisons of the length compositions from the market sampling and the discard sampling programmes for the major stocks showed generally good correspondence. There is no guarantee that either the market sampling, or the discard sampling gives the "true" LD.

ALKs for landings were created on a year, quarter, species, area basis from the market sampling data. The same strata were used for discard ALKs but the data came from the discard sampling programme. Annual versions of the ALK (i.e. year, species, area) were created for filling in missing values.

Missing values in the retained portion of the ALK (i.e. lengths observed for which no age data exist) were filled first using the annual retained ALK, then the quarterly discard ALK then the annual discard ALK. Missing values in the discarded portion of the ALK were filled using the annual discard ALK, then the annual retained ALK. Strata were only considered to have sufficient age data if more than 80% of the fish measured had associated ages. Those strata with less than 80% aged result in the provision of landings and discards biomass only. In those strata considered well aged, lengths for which there was no associated age were ignored. Numbers retained and discarded at age were raised up such that the retained biomass equalled the landings recorded in FAD (the official system for recording landings information in England and Wales. Discard data were also ignored if the retained biomass of a strata was less than 0.02% of the total landings – these strata are presented with landings biomass only. For those stocks with no observed discards (or insufficient data), the final table contains only landing information.

UK (Scotland): UK (Scotland): Landings data were provided for the years 2003-2010 for all species caught by Scottish vessels specified in the STECF data requirement. The data conforms to the aggregation by quarter, area, gear and mesh size as set out in the data request. Fisheries are defined using a combination of gear, mesh size and fishing area as set out in the STECF data requirement. Landings and discard numbers at age were derived from market sampling and discard sampling data and the data was stratified by west coast (division VIa) and east coast (sub area IV). In reflection of the changes arising from the new EU Data Collection Regulation (R(EC) No 199/2008), a different approach was adopted to estimate the age distribution and discards data for 2009 from that used for 2000 to 2008.

For 2000 to 2008, if data was from landings from one of the two areas above and if the gear category could be matched to FRS specific gear codes, catch and discard numbers at age were supplied for cod, haddock, whiting and saithe. For landings from other areas (including all areas in Southern Shelf waters), other types of gear, and in all cases for other species, only landed weight was provided for the given category. Landing numbers at age were calculated from (landed weight in the record *proportion of quarterly landed weight represented by age A)/(mean weight-at-age A). Discard numbers at age were calculated from (landed weight in the record * proportion of quarterly discarded weight represented by age A * ratio of quarterly discards to landings)/(mean weight of discards at age A). The market and discard sampling data files were produced according to the following categories

• MTR: Motor trawl (bottom trawls, boat length >= 27.432m, targeting demersal

species)

• LTR: Light trawl (bottom trawls, boat length < 27.432m, targeting demersal species)

• PTR: Pair trawl (all pair trawls targeting demersal species)

• SEN: Seine nets (single and pair)

• NTR: Nephrops trawls (all trawls targeting Nephrops)

Therefore, even though landed weights were differentiated according to the data specification of this sub-group no distinction could be made between mesh size categories in terms of proportions at age in the landings and discards, or between mesh size categories in terms of the ratio of discards to landings. In addition, age-length keys were pooled for LTR, NTR and SEN such that the age/length relationship will be common across these gears. For data up to 2008 Scottish discards were raised using a stratified ratio estimator, with the strata being defined by gear type, area (i.e. areas defined in the Scottish market sampling scheme) and quarter (January – March, April – June, …). The auxiliary variable used in the ratio estimator was species landings. Due to the expensive nature of discard sampling many strata were unsampled. This problem was overcome by adhoc fill in rules – inshore light trawl data might have been used to fill in an empty inshore Nephrops trawl stratum for example. The estimates of discards for each stratum were then summed to give an estimate of total discards, by area and gear if required. There are known problems, however, with bias and imprecision with this method.

For data from 2009 onward adhoc fill ins are no longer performed.

For the 2009 data, biological data was aggregated within Marine Scotland Science according to new metiers (consistent with the EU data collection framework regulation R(EC) No 199/2008). The data was only available for cod, haddock and whiting. For the east coast data was available for the categories

DEF : Demersal otter, demersal seine and beam trawls targeting demersal fish

CRU : Demersal otter, demersal seine and beam trawls targeting crustaceans

For the west coast data was only available for these two gear types combined. If a gear category according to the data specification could be matched to one of these gear codes catch and discard numbers at age were supplied for cod, haddock and whiting. For landings data information was available by quarter. Landing numbers at age were calculated as described above. For discard data only annual information was available. Comparisons of discard ratios can not therefore be made between quarters. To provide data in the format requested discard numbers at age were calculated from (landed weight in the record * proportion of annual discarded weight represented by age A * ratio of annual discards to landings)/(mean weight of discards at age A). Numbers and weight of fish discarded at age are only valid if the quarterly data is aggregated to provide annual totals. In addition, and as was previously the case with Scottish data even though landed weights are differentiated according to the data specification no distinction can be made between mesh size categories in terms of proportions at age in the landings and discards, or between mesh size categories in terms of the ratio of discards to landings. For landings from other areas (including all areas in Southern Shelf waters), other types of gear, and in all cases for other species, only landed weight was provided for the given category.

For comments on incorporation of special conditions see the UK (Scotland) paragraph under section 5.2.2.

5.2.5. Fleet specific landing and effort data 2003-2010 of small boats (<10m)

Belgium: Belgium did not provide any information for vessels under 10m.

Denmark: Landings and effort data for vessels less than 10m were made available by Denmark in the same format as for larger vessels. Vessels of size less than 10 m are included in the general Danish vessel register database together with the vessels > 10 m (for which logbooks are mandatory). Landings from the small vessels are however recorded through a sale slips register as for vessels > 10 m, and information on the effort of vessels < 10 m is provided through declarations of which area the fishing trip took place ("farvandserklæring"). The level of effort is estimated as one fishing day per registered trip, as most vessels engage in day-trip fishery. This is the basis for the data on landings composition and fishing area by these vessels. Gear and mesh size is often missing, and no information is provided on the ICES rectangle level. On a national scale, the number of small vessels registered in the database has been fairly constant around 850 vessels since 2000, while in comparison the number of vessels larger than 10m has decreased regularly from 1100 vessels in 2000 to 760 in 2006.

France: France provided data for vessels under 10 m for the period 2003 to 2010. All vessels registered in the national Fleet Register have to submit a declaration. Small vessels less than 10 meters are not obliged to complete logbooks but they have to submit a monthly form. These data are stored in the national data base in the same way as for other vessels (> 10 meters).

Effort data are calculated from declarative sources listed above. They were validated by cross-checking with a national sampling for monthly activity calendar. All fishing vessels are sampled directly or indirectly to assess the metiers they have done during the previous year.

Germany: Germany provided aggregated data regarding the fleet of vessels <10m. The data cover landings by area and species and effort in terms of number of vessels.

However, no mesh size information is available from the landings declarations given in the years 2004-2010. The data are evaluated in section 6.7.2.

Ireland: Ireland provided data for small vessels of less than 10 meters in length for the period 2003-2010. Attempts are underway to construct an accurate list of these small vessels, which at present stands as approximately 1284 registered vessels, of which around 600 or so hold polyvalent pot licences.

Vessels less than 10 meters are not legally required to complete logbooks, therefore data of limited detail is available. Landings data from Irish vessels under 10 meters are obtained from monthly reports. These reports provide the species live weight by ICES area landed into ports each month. No vessel, gear, or effort information is recorded. There is some doubt as to the accuracy of these monthly reports. However, landings show the main species landed by <10m vessels to be non-TAC, shellfish species. In terms of sampling programs, there are no long-term specific programs like those for over 10 meter vessels. This is partly due to the insignificant landings of TAC species, as well as issues relating to onboard sampling staff safety. However, studies are carried out on specific species or sections of the inshore fleet, including lobster and brown crab, or activity patterns of vessels from certain ports. Landings data are given in aggregated formats within each of the Annex IIA area sections for which landings are recorded for the Irish under 10m vessels.

Monitoring of effort by the small inshore vessels presents difficulties as fishers are not required to record their effort. However, the majority of these small vessels have a daily fishing pattern, leaving at dawn and returning in the afternoon of the same day to land their catch. These are primarily artisanal vessels, not equipped to hold fish on board for long periods. Gear choice of these small vessels is influenced by both home port and local available stocks. The principal methods of the inshore fleet are passive, particularly pots. However, other gears are used including otter trawls and shellfish dredges. The under 10 meter vessels exploit the territorial sea and coastal waters, operating within the ICES areas adjoining the Irish coast (VIa, VIIa, VIIb, VIIg and VIIj).

No information regarding small boats <10m was provided by the Netherlands.

No information regarding small boats <10m was provided by Portugal

Spain: No information about vessels under 10 meters was provided. Annex IIB does not deal with vessels under 10 meters.

Sweden: Effort and landing data for vessels less than 10m were made available by Sweden in the same format as for larger vessels. Vessels <10 m that are using trawl and demersal seines are obliged to use the same logbook as larger vessels. Vessels <10m using other gears are using the “coastal fishing journal” which predominantly follows the same structure as the standard logbook. Sweden reported landings on Nephrops, Cod and Plaice for vessels (<10m) for 2003-2010.

UK England, Wales and Northern Ireland: Data on catch and effort for under 10 m vessels are made available for UK vessels (including England, Wales and Northern Ireland). However, the effort data in particular are likely to be incomplete as there was no obligation for vessels to report effort before mid-2006.

UK Scotland: The effort data for 2000-2010 are given in a format consistent with the data submissions for bigger boats. Prior to the introduction of UK legislation known as the Register of Buyers and Sellers (RBS) for shellfish in Scotland in early 2006, some effort catching shellfish using POTS and Shell fishing by hand appears to have been under recorded but the data for effort by other gears (those regulated for vessels >10m) shows no change in trend consequent on the introduction of RBS and therefore can be assessed as being complete in earlier years. The effort data supplied for Scottish registered vessels for 2000 to 2008 excludes voyages landing into ports in England and other non- Scottish areas of the UK and incorporated some simplifying assumptions on mesh size to minimise multiple counting of boats. However, from 2009, the data covers all Scottish registered vessels and no simplifying assumptions have been made. Data on number of vessels per category has been supplied. Scottish under 10m boats are known to use more than one type of gear on individual trips or within a quarter, however and multiple counting of boats is therefore significant. The landings data for 2003-2010 are given in a format consistent with the data submissions for bigger boats.

Although UK (Scotland) carry out a stratified sampling observer programme based on gear, area and quarter, no specific consideration is given to estimating discards for vessels in the category of 10 metres or under in length. Vessels in this category are classed in the same groups as vessels over 10 metres in length based on the fishing method rather than vessel size. For a variety of reasons, including Health and Safety, discard sampling staff tend not to sail on vessels in the 10 metre and under category.

In 2003 the Scottish Fisheries Statistics showed landings of the main commercial demersal species from vessels in the <=10 metre category operating in Scotland to be below the level where the sampling intensities as defined in Appendix XV (Section H) of regulation (EC) 1639/2001 (Table 2) requires sampling to be carried out. A pilot study conducted in 2004 comparing a <=10m vessel and >10m vessel using trawl gear and targeting *Nephrops* concluded overall weight discarded per hour was very similar between the vessels. As a consequence regular sampling of the <=10 metre category in relation to landings and discards of *Nephrops* are conducted but the estimation of demersal discards for this category is based on the assumption that all vessels targeting *Nephrops* and operating in the same sampling area have the same catching and discarding characteristics.

5.3. Estimation of fleet specific international landings and discards

The estimation of fleet specific international landings and discards is based on linking the information about fleet specific discards and catch and discards at age among countries and replacing poor or lacking values with aggregated information from other countries.

Reported data by country are aggregated by fleet properties and raised to the officially reported landings or discards in the SGDFF 2004 (ICES 2004) format. Fleet definitions are based on area, year, quarter, gear, mesh size groups, special conditions as defined in Council Reg. 41/2007 Annexes 2A-C and national fisheries (metiers) definitions.

The data management and estimation procedures follow the simple raising strategies outlined below :

- Data management:

  The fleets are classified to their management areas, years, quarters and effort regulated gear groups disregarding the countries and fisheries (metiers).

- Estimation of discard rates by fleet (DR):

  Let the following notation be: D=discards, L= landings, *snf* = sampled national fleet, *unf* = unsampled or poorly sampled national fleet.

A poorly sampled fleet is defined as such when $SOP_{snf} < 0.75$ or $SOP_{snf} > 1.25$

The available landings and discards are aggregated (summed) by fleets and mean discard rates are calculated:

$$DR = \frac{\sum_{snf} D_{snf}}{\sum_{snf} (L_{snf} + D_{snf})}$$ with $D_{snf} \geq 0$ and with $L_{snf} + D_{snf} > 0$ otherwise 0 (means no catch)

Fleet specific discard amounts are calculated when no discard information is available by

$$D_{unf} = \frac{L_{unf}.DR}{(1-DR)}$$ when D_{unf} is null (empty)

Fleets without any discards information remain as such.

- Estimation of landings in numbers and mean weight at age for non or poorly sampled national fleets

  Let *i* be the age reference

  Landings in numbers ($N_{snf,i}$) and mean weight at age ($W_{snf,i}$) are aggregated by sampled fleets when SOP$_{snf}$ ≥ 0.75 and SOP$_{snf}$ ≤ 1.25.

  Raising of numbers and mean weights at ages 0-11 to non or poorly sampled fleets by

$$N_{unf,i} = \frac{\sum_{snf} (N_{snf,i}).L_{unf}}{\sum_{snf} L_{snf}}$$

$$W_{unf,i} = mean(W_{snf,i})$$

  The mean weights are unweighted and an appropriate weighing procedure, i.e. number of fish measured, should be explored.

  Fleets without any landings at age information remain as such.

- Estimation of discards in numbers and mean weight at age for non or poor sampled fleets

  Discards in numbers ($N_{snf,i}$) and mean weight at age ($W_{snf,i}$) are aggregated by sampled fleets when SOP$_{snf}$ ≥ 0.75 and SOP$_{snf}$ ≤ 1.25 along the same procedure as for the landings.

  Raising of numbers and mean weights at ages 0-11 to non or poorly sampled fleets by

$$N_{unf,i} = \frac{\sum_{snf}(N_{snf,i}).D_{unf}}{\sum_{snf} D_{snf}}$$

$$W_{unf,i} = mean(W_{snf,i})$$

The mean weights are unweighted and an appropriate weighing procedure, i.e. number of fish measured, should be explored.

Fleets without any landings at age information remain as such.

An example of this raising procedure is given in Table 15.2.3.2 under the header "Discards", the values between parenthesis are the estimated values.

- Catch at age estimation including discards

  Catches by fleets are estimated as the sum of landings and discards. Missing discards are ignored.

  Catches at ages 0-11 in numbers are estimated as the sum of landings at age in numbers and discards at age in numbers. Missing discards are ignored.

  Mean weights at ages 0-11 are estimated at weighted means (according to ratios of landings at age and discards at age to catches at age).

  Finally, all fleets' catches and catches at ages in numbers and mean weights are aggregated finally over management areas, years and effort regulated gear groups.

  Fleets without any information on discards or landings at age and discards at age remain unchanged and need to be raised separately on an agreed basis in case that they constitute significant landings.

The EWG-11-11 notes that sampling of catch at sea including discards is expensive and difficult. This means that sampling coverage tends to be rather limited, and estimates of discards are subject to high uncertainty. This is true of all the discard data used here, and in some cases the discard estimates presented represent the first attempt to use the discard data from some fisheries in an advisory context. Where the coverage is considered adequate to estimate the overall catch compositions of specific fleets these are presented, but they are intended only to provide an approximate indication of fleet catch compositions. In cases where there are little data, the estimated discard rates may be biased and imprecise (Stratoudakis *et al.*, 1999). The mean weights are estimated as unweighted means. This results in a biased estimate. An appropriate weighing procedure, i.e. number of fish measured, should be explored.

EWG-11-11 further notes that the approach of discard estimation applied is generally consistent with the method used in the discard estimates published by the FAO (Kelleher, 2004). However, the group also notes that the design of a discard sampling scheme might differ depending on whether the objective was to estimate total discards, or discard for specific fleets. In the current context estimates from sampling schemes designed for the former purpose are being used for the latter purpose which again means the estimates should only be used with caution. Where this is the case, comparisons are made between the estimates of total discards used for assessment purposes, and the fleet-specific estimates used here.

With regard to age composition data, EWG-11-11 notes that the analyses presented here are intended to quantify the catch compositions of the various fleets and gears of interest. For this purpose it is the species compositions and the estimated landings and discards that are of primary importance, with the age compositions being only of secondary importance. Applying the age compositions to the national catches by fleet and gear is a complex process not least because it typically involves considerable filling-in to account for categories which do not correspond to those within national sampling schemes. It would make any future data compilation and analyses much more efficient if age composition data were not required. While there is clearly a trade-off between efficiency on one hand and providing additional information on the other, the group notes that in the current context the age composition data add little information. As a result it proposes that any future data requests and analyses should be restricted to age-aggregated information.

5.4. Treatment of CPUE data

In this report, EWG-11-11 presents CPUE by regulated gears in units of g/(kW*days). Where discard estimates are not available, the trends in LPUE (landings per unit of effort) are given in the same units. Unfortunately, discard information continues to be sparse or absent for some categories of gear in some areas. **STECF wishes to stress again that great care should be used in the interpretation of these data owing to the incomplete nature of information on discarded fish.**

EWG-11-11 notes that CPUE series are often interpreted and used as stock abundance indicator. However, EWG-11-11 emphasises that the presented trends in CPUE by fleets are subject to selective fishing strategies (area, gear, mesh size etc.) and thus maybe biased. On the other hand, CPUE derived from targeted fisheries may provide very useful information on stock abundance trends. Furthermore, it must be taken into consideration that the majority of the CPUE trends represent only overall weights in the landings (LPUE) without discards or with poorly estimated discards. Ideally, the CPUE should be based on age disaggregated abundance rather than overall weights and reflect technological creep when trends over longer periods are evaluated.

5.5. Ranking of gears on the basis of contribution to catches

Where required, EWG-11-11 presented the ranked contributions of the individual regulated gears listed in **Annex I to R(EC) No 1342/2008** to cod, plaice and sole catches for the years 2003 to 2008. There was discussion about whether the ranking should be based on a single recent year (possibly reflecting the most up to date importance of the different gear types in contributing to mortality of these species) or an average for a range of years (which allows for any aberrations in the series). A decision was taken to rank according to 2008. The data for other years are available for alternative analysis in the background spreadsheets.

The catch estimates are based on the sums of the landings and discards where available. STECF-SGRST considers the catch estimates as uncertain where derogations lack discard estimates or they are poorly sampled. The ranking according to catch in numbers only considers derogations for which catch in numbers are available. **STECF wishes to stress again that great care should be used in the interpretation of these data owing to the incomplete nature of information on discarded fish.**

5.6. Summary of effort and landings by 'unregulated' gears

In the summary tables of effort (for example in Section 6.2.1, 6.3.1 etc.) a total value for a 'none' category is provided. This 'none' category represents i) gear types and mesh sizes which are unregulated under Annex I, Coun. Reg. 1342/2008 in addition to ii) unidentified mesh sizes. In the main effort summary tables, this category is not broken down into its constituent gears. However, STECF SGMOS has provided a break down of the main gears within the 'none' category in a dedicated subsection for each area (for example Section 6.2.5, 6.3.5 etc). Information is given on effort (kW*days at sea) for gears such as 'beam', otter, pots, dredges etc, and for catches by these gears of key species (e.g. cod, plaice and sole). This analysis helps to identify which gears contribute significantly to landings of these species but which are not currently regulated.

With the adoption of the revised cod recovery plan towards the end of 2008 and the simplified list of regulated gears for which data are now collated, the compilation of the unregulated categories was more straightforward in 2009 onward and the data appear to be reliable.

It is important in making use of the data in this report, that the 'none' material is not counted more than once. It would be preferable to use data from the sections covering unregulated gears.

5.7. Presentation of under 10m information

This STECF-SGRST report provides an overview of landings and effort data provided by the experts regarding their national fisheries of vessels <10m, which are not obliged to report their landings through logbooks but rather do landings declarations.

Previously, information on vessels <10m has been provided in the STECF SGRST reports only as a series of individual country reports describing activities and landings. In this report individual country information is again provided where available – new information is provided from several countries. An attempt is also made to compile available information for each area into overall figures. Since not all countries were able to fulfil this part of the data call, the aggregate estimates for each region of the cod recovery zone **must be considered as minimum estimates**. Nevertheless, they begin to give an idea of the scale of landings contributed by these smaller classes of vessel and can be used to comment on the likely relative importance compared with the regulated vessels.

5.8. Presentation of spatial information on effective effort

STECF-EWG notes that minimum geographic resolution in the available logbook information on landings and effective effort is by ICES rectangle and considers analyses to only be possible at that resolution at the present time. In a number of the smaller areas, however, this resolution is inadequate for describing any localised changes of effort distribution (for example, in the Kattegat) and finer scale is desirable. Increasing availability of VMS data should provide opportunities for improved resolution in due course. The effective effort values of certain nations were given in days fished which were then converted to trawled hours by applying a factor of 24. STECF-SGRST notes that only major changes in the geographical distribution patterns should be given attention given the imprecision of the created data set. A full set of figures is available electronically but a selection of key gears is included in this report.

Figures use a common scale across years for a given category (e.g. TR1) but scales are unique to each category such that the colours assigned to statistical rectangles for category TR1 can not be compared directly to those assigned for category TR2 say. Note that this year the scale used in the plots relates to the actual effort values (rather than the percentile method used in previous years).

6. REVIEW OF (ANNEX IIA TO REGULATION (EC) NO 43/2009) IN THE CONTEXT OF THE COD RECOVERY PLAN (REGULATION 423/2004)

6.1. General remarks

STECF EWG notes that the 2011 report includes the second full year of the revised cod plan operational from 2009. STECF-EWG notes that the categories of the new plan are simpler to present. In this case there are a limited number of derogations relating to Articles 11 and 13 of the Council Regulation. For these derogations, member states are required to collect data for the specific vessels involved and summary tables in the report specifically identify these data.

It is, however, the case that configurations of gear adopted to fulfil the requiremnents of the Article 13 derogation are very variable across the member states are often not registered in the logbook databases, eg *inter-alia*. multi rigging, sorting or escapement devices or in-season management plans. STECF-EWG notes that in-season information and fleet aggregations imply the direct involvement of the national control and enforcement institutions in the review process. STECF-EWG recommends that to the fullest extent possible, national logbook data bases be made consistent with both the regulations defined in Annex IIA of the fishing opportunities regulation and the fleet-metier definitions defined under the revised data collection regulation (Council Reg. 199/2008). Data are also provided for vessels under the 'fully documented fishery' provisions (eg use of CCTV) .

Allocations of effort in kW*days per member state and gear type for 2010 under the new cod plan regulations can be found in Appendix 1 to Annex II of Council Regulation 43/2009 (TAC and Quota Reg).

IT IS IMPORTANT TO NOTE THAT SOME ISSUES CONTINUE WITH DATA AS FOLLOWS:

A) FRENCH EFFORT DATA FOR 2002 ARE KNOWN TO BE SPURIOUS AND HAVE NOT SO FAR BEEN CORRECTED

B) FRENCH DATA FOR 2009 APPEAR TO BE THE SAME AS WERE SUBMITTED FOR 2008 BUT DO NOT APPEAR TO HAVE BEEN CORRECTED

C) THERE WERE NO SPANISH DATA SUBMITTED FOR 2010.

6.2. Regional Area 3a: Kattegat

Overview remarks

All Member States fishing in this area have reported their effort data, including mesh size range category and derogations and the overall confidence in the results are high. In 2011 Sweden updated with data for 2009-2010, whereas Germany and Denmark only submitted 2010.

6.2.1. Trend in effort by gear group and derogation in management area 2a: Kattegat

Trends in effort by the new cod plan gear groups and by country are shown in Table 6.2.1.1. The total effort in the Kattegat decreased by 31 % between 2004 and 2011. The total regulated effort has decreased by 31% since 2004, but stayed unchanged between 2009 and 2010. Table 6.2.1.2 summarises the aggregated effort by regulated cod plan gear categories. TR2 dominates the effort in recent years.

Fisheries in the Kattegat are almost exclusively conducted by Denmark and Sweden (74% and 24% of the total regulated effort in 2010 respectively) using predominantly trawls (around 83% of the total effort, and 95% of the regulated effort 2010), primarily in the gear class TR2 (80% of total effort in 2010 and 92 % of the regulated effort 2010). Beam trawls are forbidden.

The effort deployed by passive gears (GN1, GT and LL1) is relatively small, with a stable share of around 5% of the total regulated effort since 2005. The amount of unregulated effort (effort that could not be assigned to the regulated gear categories) has decreased from 2009 to 2010 (18 % 2009 to 12 % in 2010).

There are two derogations in place in Kattegatt, Cpart 13 and Cpart 11. All Danish and German effort in gear category TR2 in 2010 is under the category Cpart 13. On the other hand, only Sweden reported under the derogation CPart11 in gear category TR2 (in this case achieving the <1.5% cod catch by using a sorting grid), and this represented 63% of the effort deployed by this country in this gear category in 2010 (48 % in 2009). It is though in principle now an unregulated gear. However, Cpart 11 is still accounted under the corresponding regulated gears in the tables below, for the matter of comparison and evaluation. Overall, this derogation represented 14% of the total regulated effort in Kattegat in 2010.

Table 6.2.1.1 Kattegat: Trend in nominal effort (Kw *days at sea) by Gear group and country. 2004-2010.

REG AREA CODE	REG GEAR CODE	COUNTRY	2004	2005	2006	2007	2008	2009	2010	Rel 2004	Rel 2009
3a	**GN1**	DEN	111650	130267	104450	72977	66270	83095	66976	0,60	0,81
		GER	14289	26827	38486	39725	31562	23156	19526	1,37	0,84
		SWE	17690	9609	14748	14949	32697	33120	32270	1,82	0,97
	GT1	DEN	14791	28221	24922	12119	11758	23209	14225	0,96	0,61
		SWE	11254	12833	19178	34170	29266	17518	26612	2,36	1,52
	LL1	DEN	3080		220			406			
		SWE	1376	10684	27478	37856	25234				
	TR1	DEN	191679	205850	193619	186575	158868	104096	69037	0,36	0,66
		GER	2390	4985	5262	5526	1964				
		SWE	15121	24870	5160	19799	57592	6985	13626	0,90	1,95
	TR2	DEN	3059057	2547492	2254222	2026307	2148493	2214066	2385563	0,78	1,08
		GER	31861	7505	10318	35338	38716	19918	30730	0,96	1,54
		SWE	1043622	1046257	1228296	1275042	1227656	851549	767026	0,73	0,90
	TR3	DEN	481725	485616	358274	306240	152411	95897	36383	0,08	0,38
		GER									
		SWE				1470		1148			
Total			**4999585**	**4541016**	**4284633**	**4068093**	**3982487**	**3474163**	**3461974**	**0,69**	**1,00**

Table 6.2.1.2 Kattegat: Trend in nominal effort (Kw *days at sea) by Gear group. 2004-2010.

REG AREA	REG GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	Rel 2004	Rel 2010
3a	**GN1**	**none**	143629	166703	157684	127651	130529	139371	118772	0,83	0,85
	GT1	**none**	26045	41054	44100	46289	41024	40727	40837	1,57	1,00
	LL1	**none**	4456	10684	27698	37856	25234	406	0	0,00	0,00
	TR1	**none**	209190	235705	204041	211900	218424	111081	82663	0,40	0,74
	TR2	**CPART11**						415194	482432		1,16
		CPART13							2405583		
		none	4134540	3601254	3492836	3336687	3414865	2670339	295304	0,07	0,11
	TR3	**none**	481725	485616	358274	307710	152411	97045	36383	0,08	0,37
Total regulated gears			**4999585**	**4541016**	**4284633**	**4068093**	**3982487**	**3474163**	**3461974**	**0,69**	**1,00**
Total unregulated gears			725812	772197	818623	735521	521348	770303	504553	0,70	0,66
Totalt			**5725397**	**5313213**	**5103256**	**4803614**	**4503835**	**4244466**	**3966527**	**0,69**	**0,93**

Note that all Danish and German data for TR2 'none' is now under TR2 CPart 13 derogation for 2010. Sweden is the only country using the derogation Cpart 11 in gear class TR2. All the TR2 none effort is Swedish

Table 6.2.1.3 shows that there were few changes in the data between 2009 and 2010 reflecting the fact that only Sweden updated data for 2009 and 2010 this year. Whereas Denmark and Germany only updated 2010

The minor differences in Swedish passive gear, GN1 and GT1, are due to the continuous validation processes for the logbooks data. The time trends in effort are shown graphically in Figures 6.2.1.1 for the cod plan (all gears and trawl).

The effort deployed in Gross tonnage days (GTdays) and number of vessels are not described in this report

but can be found on the STECF EWG 11-11 website under the Final Report section:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

Table. 6.2.1.3 Kattegat: Relative change in nominal effort 2010 data submission compared to 2009

submission (Kw *days at sea) by gear, derogation and country 2000-2009

.

ANNEX	REG AREA	REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
IIa	3a	GN1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3a	GN1	GER	0	0	0	0	0	0	0	0	0	0
IIa	3a	GN1	SWE	0	0	0	0	0	0	0	0	0	0,064
IIa	3a	GT1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3a	GT1	SWE	0	0	0	0	0	0	0	0	0	0,016
IIa	3a	LL1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3a	LL1	SWE	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR1	GER	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR1	SWE	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR2	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR2	GER	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR2	SWE	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR3	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR3	GER	0	0	0	0	0	0	0	0	0	0
IIa	3a	TR3	SWE	0	0	0	0	0	0	0	0	0	0

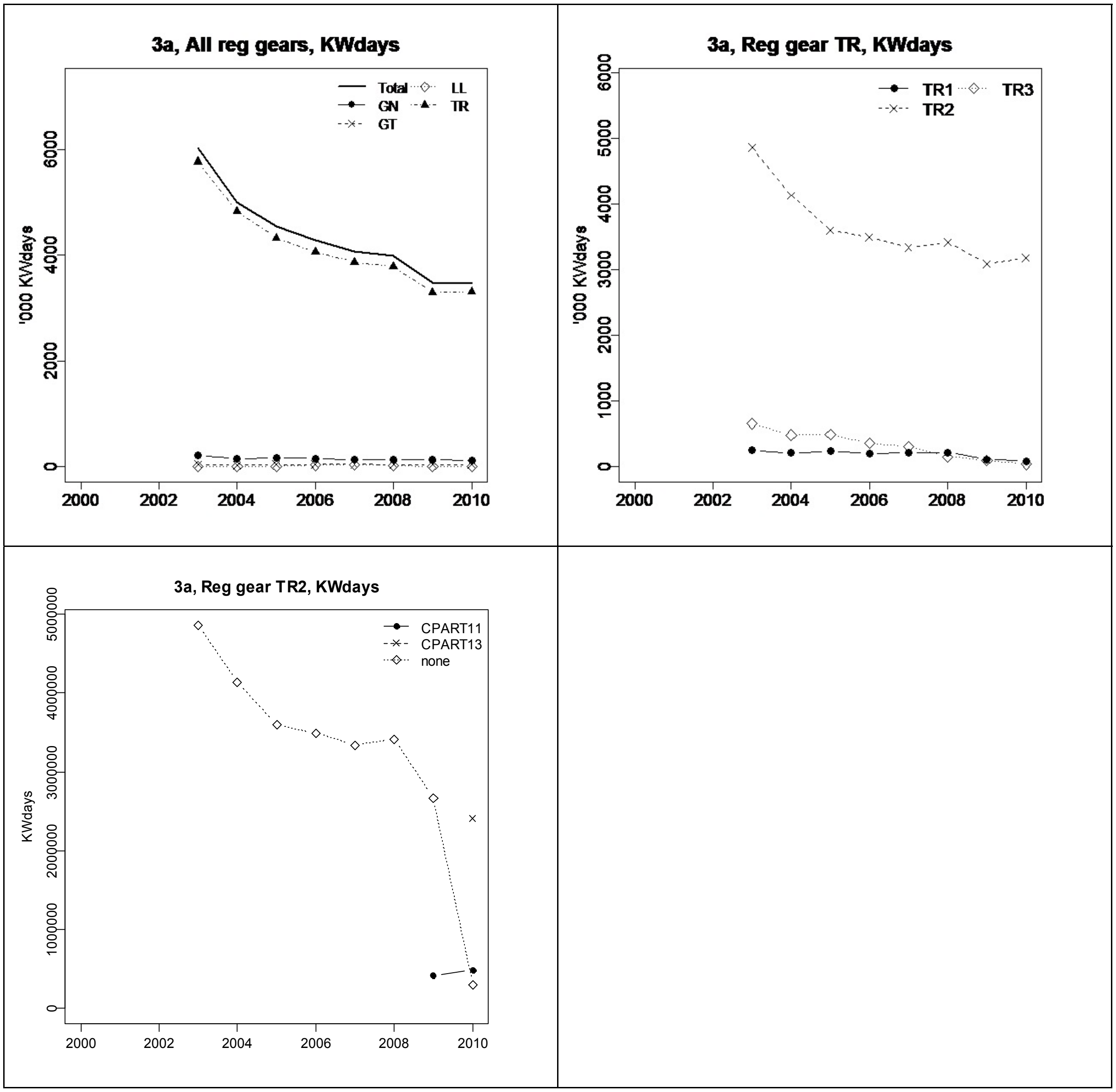


Figure 6.2.1.1. Kattegat: Top left: Trend in nominal effort (Kw *days at sea) by gear types, 2000-2010. TR = demersal trawl, BT = Beam trawl, GN = Gillnet, GT = Trammel net, LL = Longline. Top right. , effort by gear types within gear type TR; TR1=mesh size ≥100mm; TR2=mesh size ≥70, ≤100mm; TR3 ≥16, ≤32 mm.

Bottom:effort by special conditions within gear type TR2.

All Danish and German TR2 none effort in 2009 are now in derogation TR2 Cpart 13. The Swedish TR2 effort are in the TR2 none and TR2 CPART 11.The total TR2 effort (top right figure) decreased rapidly from 2003 to 2005. From 2006 and onwards the effort decreased more slowly and has increased again from 2009 to 2010.

6.2.2. Catch

Landings, discards and discard rates of cod, sole and plaice, as well as *Nephrops* and whiting, by cod plan gear category are shown in Tables 6.2.2.1.

Denmark's submission of discard data for TR2 Cpart 13 on species other than for cod was submitted already for the first meeting in June. Owing to an inadvertent oversight in the updating of the database for the Cadiz meeting, they were not included in the tables and figures. However, since the discard data were actually available at the meeting the tables and figures in this section are discussed with reference to the new data.

For information, the Danish discard data for TR2 Cpart 13 in 2010 is as follows: Nephrops **(NEP)=721 tonnes**, Plaice **(PLE)=304 tonnes**, **Sole (Sol)=10 tonnes**, **Whiting (WHG)=173 tonnes**. These discard numbers are in the range of Danish discard data in the TR2 gear group received previous years by this group.

There are no discards estimates available for the gears GN, GT and TR3.There are a number of considerations with regards to the discard estimates in this area. There is some discrepancy in the sampling between the two main countries, and there are several aspects that bias the use of discard data within a gear group across countries. In Kattegat, the differences in national management systems as well as differences in fishing patterns mean that it is not always possible to consider the Swedish discard data representative for the Danish or German fishery (or *vice versa*). The different management regimes have implications on the discard patterns of fish, particularly fish discarded for quota reasons as the quotas are not being taken up at the same pace.

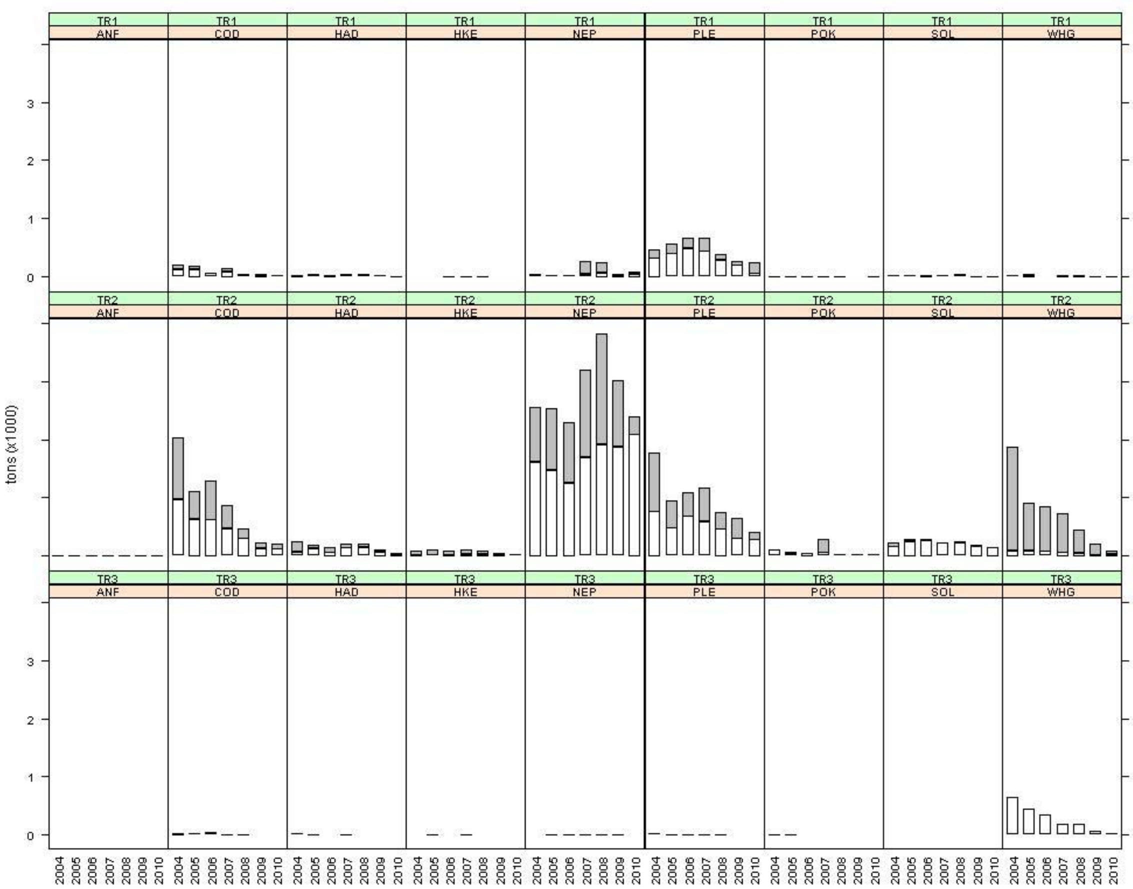
In Sweden the fishery is managed by weekly quotas while Denmark in 2007 introduced individual vessel quotas. The fishery in Sweden is also characterised by long periods of prohibition for landing certain species, particularly cod. In 2006 the cod fishery in Kattegat was closed for 8 months and in 2008 for the whole of the third quarter. In 2010, 41% of the TAC of Kattegat cod (379 tonnes) was landed.

Table 6.2.2.1 Kattegat Landings(L) , discard (D) and discard rate (R) of cod, plaice, sole, Nephrops and whiting by Gear 2003-2009.There are no Danish discard data for TR2 Cpart 13 other than for cod included in the table.

Annex	Species	Gear	Specon	Country	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
IIa	COD	GN1	none	DEN	33	0	0	24	0	0	16	0	0	22	0	0	34	0	0	11	0	0	10	0	0
IIa	COD	GN1	none	GER	2	0	0	1	0	0	5	0	0	4	0	0	1	0	0	0	0	0	0	0	0
IIa	COD	GN1	none	SWE	1	0	0	2	0	0	4	0	0	2	0	0	11	0	0	2	0	0	0	0	0
IIa	COD	GT1	none	DEN	8	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
IIa	COD	GT1	none	SWE	6	0	0	5	0	0	1	0	0	2	0	0	3	0	0	1	0	0	0	0	0
IIa	COD	LL1	none	DEN	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	COD	LL1	none	SWE	0	0	0	1	0	0	3	0	0	0	0	0	14	0	0	0	0	0	0	0	0
IIa	COD	TR1	none	DEN	68	52	0,43	83	42	0,34	36	8	0,18	51	40	0,44	25	1	0,04	16	12	0,43	3	0	0
IIa	COD	TR1	none	GER	6	0	0	9	6	0,4	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IIa	COD	TR1	none	SWE	35	27	0,44	25	9	0,26	8	1	0,11	31	7	0,18	7	2	0,22	1	0	0	1	0	0
IIa	COD	TR2	CPART11	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	0	10	1
IIa	COD	TR2	CPART13	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	71	0,46
IIa	COD	TR2	CPART13	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	COD	TR2	none	DEN	559	306	0,35	346	211	0,38	346	189	0,35	252	193	0,43	182	122	0,4	86	54	0,39	0	0	0
IIa	COD	TR2	none	GER	3	6	0,67	0	0	0	1	0	0	2	1	0,33	1	0	0	0	0	0	0	0	0
IIa	COD	TR2	none	SWE	398	754	0,65	284	262	0,48	282	475	0,63	198	207	0,51	117	45	0,28	35	21	0,38	27	10	0,27
IIa	COD	TR3	none	DEN	26	0	0	14	0	0	36	0	0	7	0	0	7	0	0	0	0	0	0	0	0
IIa	NEP	GN1	none	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	NEP	GN1	none	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	NEP	GN1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	NEP	GT1	none	DEN	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
IIa	NEP	GT1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	NEP	TR1	none	DEN	6	3	0,33	6	0	0	5	0	0	25	200	0,89	38	134	0,78	13	10	0,43	32	27	0,46
IIa	NEP	TR1	none	GER	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
IIa	NEP	TR1	none	SWE	0	0	0	1	0	0	0	0	0	4	25	0,86	25	32	0,56	4	4	0,5	3	3	0,5
IIa	NEP	TR2	CPART11	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	241	216	0,47	264	180	0,41
IIa	NEP	TR2	CPART13	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1681	0	0
IIa	NEP	TR2	CPART13	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0
IIa	NEP	TR2	none	DEN	1334	679	0,34	1168	882	0,43	894	853	0,49	1185	964	0,45	1374	1230	0,47	1411	734	0,34	0	0	0
IIa	NEP	TR2	none	GER	9	5	0,36	2	1	0,33	6	6	0,5	13	13	0,5	19	18	0,49	15	10	0,4	11	10	0,48
IIa	NEP	TR2	none	SWE	269	251	0,48	300	178	0,37	345	189	0,35	480	533	0,53	515	661	0,56	201	182	0,48	123	114	0,48
IIa	NEP	TR3	none	DEN	0	0	0	1	0	0	2	0	0	1	0	0	1	0	0	1	0	0	0	0	0
IIa	PLE	GN1	none	DEN	101	0	0	67	0	0	60	0	0	52	0	0	53	0	0	18	0	0	15	0	0
IIa	PLE	GN1	none	GER	2	0	0	5	0	0	8	0	0	6	0	0	3	0	0	3	0	0	2	0	0
IIa	PLE	GN1	none	SWE	7	0	0	1	0	0	2	0	0	4	0	0	4	0	0	6	0	0	3	0	0
IIa	PLE	GT1	none	DEN	14	0	0	17	0	0	24	0	0	6	0	0	10	0	0	3	0	0	3	0	0
IIa	PLE	GT1	none	SWE	21	0	0	19	0	0	20	0	0	21	0	0	29	0	0	3	0	0	7	0	0
IIa	PLE	LL1	none	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	PLE	TR1	none	DEN	315	142	0,31	388	173	0,31	461	181	0,28	429	208	0,33	268	95	0,26	180	70	0,28	53	181	0,77
IIa	PLE	TR1	none	GER	0	0	0	2	0	0	6	2	0,25	2	1	0,33	0	0	0	0	0	0	0	0	0
IIa	PLE	TR1	none	SWE	2	3	0,6	2	2	0,5	1	1	0,5	3	16	0,84	4	4	0,5	1	1	0,5	0	2	1
IIa	PLE	TR2	CPART11	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	37	0,92	3	26	0,9
IIa	PLE	TR2	CPART13	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	248	0	0
IIa	PLE	TR2	CPART13	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
IIa	PLE	TR2	none	DEN	675	840	0,55	416	361	0,46	545	250	0,31	454	264	0,37	382	206	0,35	245	253	0,51	0	0	0
IIa	PLE	TR2	none	GER	3	5	0,62	1	0	0	1	0	0	2	2	0,5	2	2	0,5	2	2	0,5	0	2	1
IIa	PLE	TR2	none	SWE	93	160	0,63	62	108	0,64	129	158	0,55	116	317	0,73	84	72	0,46	40	61	0,6	34	92	0,73
IIa	PLE	TR3	none	DEN	9	0	0	7	0	0	1	0	0	4	0	0	1	0	0	0	0	0	0	0	0

Annex	Species	Gear	Specon	Country	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
IIa	SOL	GN1	none	DEN	18	0	0	74	0	0	58	0	0	30	0	0	30	0	0	40	0	0	31	0	0
IIa	SOL	GN1	none	GER	15	0	0	33	0	0	43	0	0	33	0	0	27	0	0	21	0	0	19	0	0
IIa	SOL	GN1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	8	0	0
IIa	SOL	GT1	none	DEN	2	0	0	13	0	0	11	0	0	6	0	0	6	0	0	8	0	0	6	0	0
IIa	SOL	GT1	none	SWE	2	0	0	3	0	0	6	0	0	9	0	0	10	0	0	7	0	0	15	0	0
IIa	SOL	TR1	none	DEN	4	0	0	9	0	0	17	0	0	9	5	0,36	7	0	0	2	0	0	1	0	0
IIa	SOL	TR1	none	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	SOL	TR1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	SOL	TR2	CPART11	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0,89	2	2	0,5
IIa	SOL	TR2	CPART13	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	0	0
IIa	SOL	TR2	CPART13	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
IIa	SOL	TR2	none	DEN	146	50	0,26	230	23	0,09	247	14	0,05	191	13	0,06	201	7	0,03	161	7	0,04	0	0	0
IIa	SOL	TR2	none	GER	3	2	0,4	0	0	0	0	0	0	2	0	0	4	0	0	1	0	0	1	0	0
IIa	SOL	TR2	none	SWE	10	14	0,58	15	2	0,12	17	2	0,11	16	1	0,06	8	9	0,53	3	3	0,5	6	0	0
IIa	SOL	TR3	none	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	GN1	none	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	GN1	none	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	GN1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	GT1	none	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	GT1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	LL1	none	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	TR1	none	DEN	5	13	0,72	1	23	0,96	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0
IIa	WHG	TR1	none	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	TR1	none	SWE	0	0	0	1	2	0,67	0	0	0	2	13	0,87	1	9	0,9	0	1	1	0	1	1
IIa	WHG	TR2	CPART11	SWE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17	0,94	1	11	0,92
IIa	WHG	TR2	CPART13	DEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
IIa	WHG	TR2	CPART13	GER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	TR2	none	DEN	30	870	0,97	20	586	0,97	19	513	0,96	18	411	0,96	12	247	0,95	10	111	0,92	0	0	0
IIa	WHG	TR2	none	GER	1	27	0,96	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
IIa	WHG	TR2	none	SWE	51	887	0,95	47	247	0,84	56	258	0,82	48	250	0,84	31	148	0,83	12	54	0,82	7	42	0,86
IIa	WHG	TR3	none	DEN	637	0	0	431	0	0	333	0	0	173	0	0	170	0	0	54	0	0	16	0	0

The Danish discard data on TR2 Cpart 13 for 2010 is in line with previous discard estimates of Danish discard data for the gear group TR2 none in 2009. The Danish discard data for TR2 Cpart 13 in 2010. Is as follows: Nephrops **(NEP)=721 tonnes**, Plaice **(PLE)=304 tonnes**, **Sole (Sol)=10 tonnes**, **Whiting (WHG)=173 tonnes**. These discard numbers are in the range of Danish discard data in the TR2 gear group received previous years by this group.



Figures 6.2.2.1. The landings and discards of Trawled gears (TR1,TR2, TR3) by species and year 2004-2010.

There are No Danish discard data for TR2 CPart 13 for 2010 other than for cod included in the figure. By including Danish discard data of Nephrops for TR2 2010, the total amount of discard is around 50 % , similar to previous years. Also by including Danish discard data for TR2 on plaice sole and whiting gives the same proportion of discard in relation to landings as previous years in TR2.

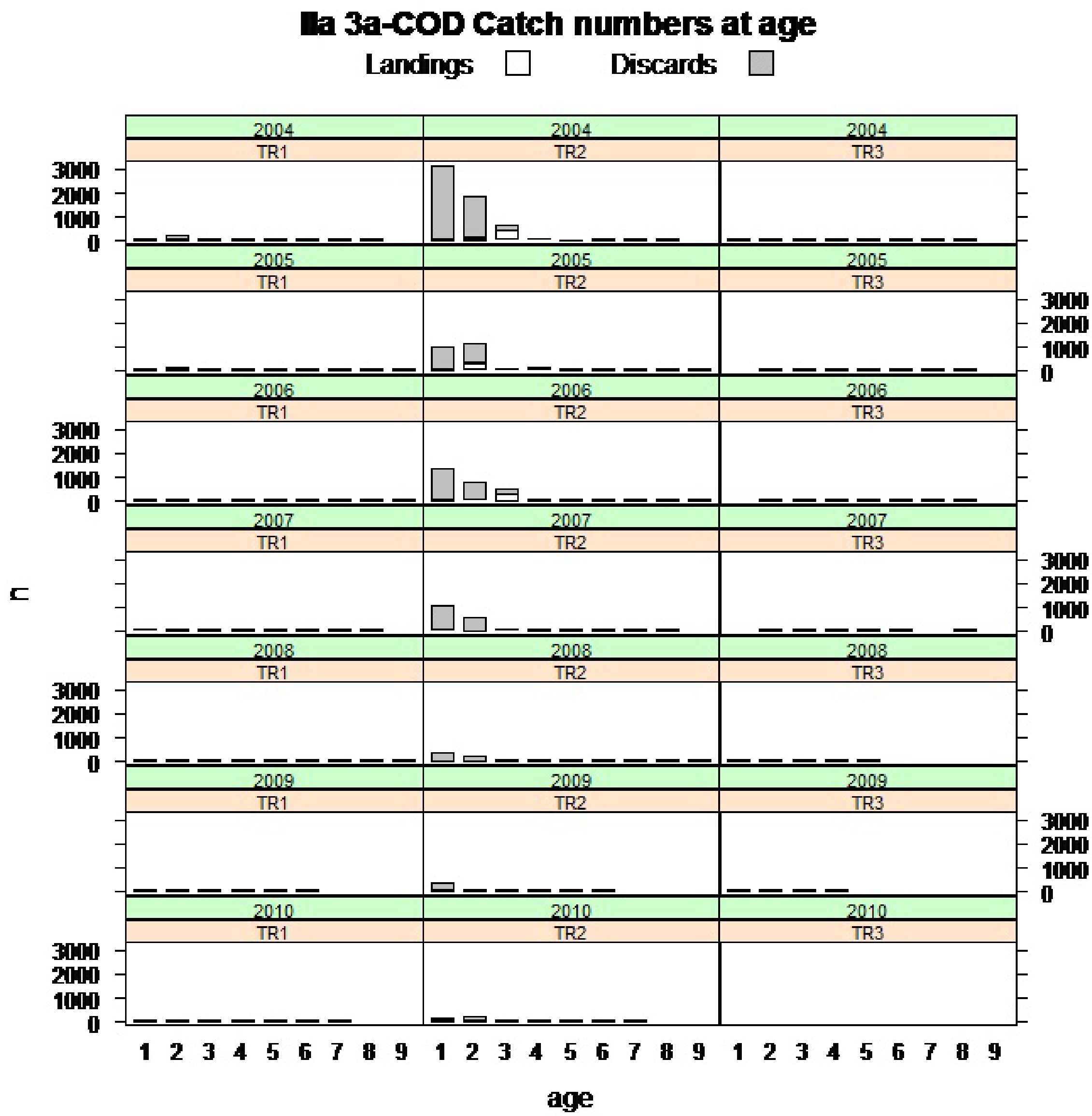


Fig 6.2.2.2 Landings and discards by age of cod in gear group TR1;TR2;TR3 in area 3a Kattegat 2004-2010).

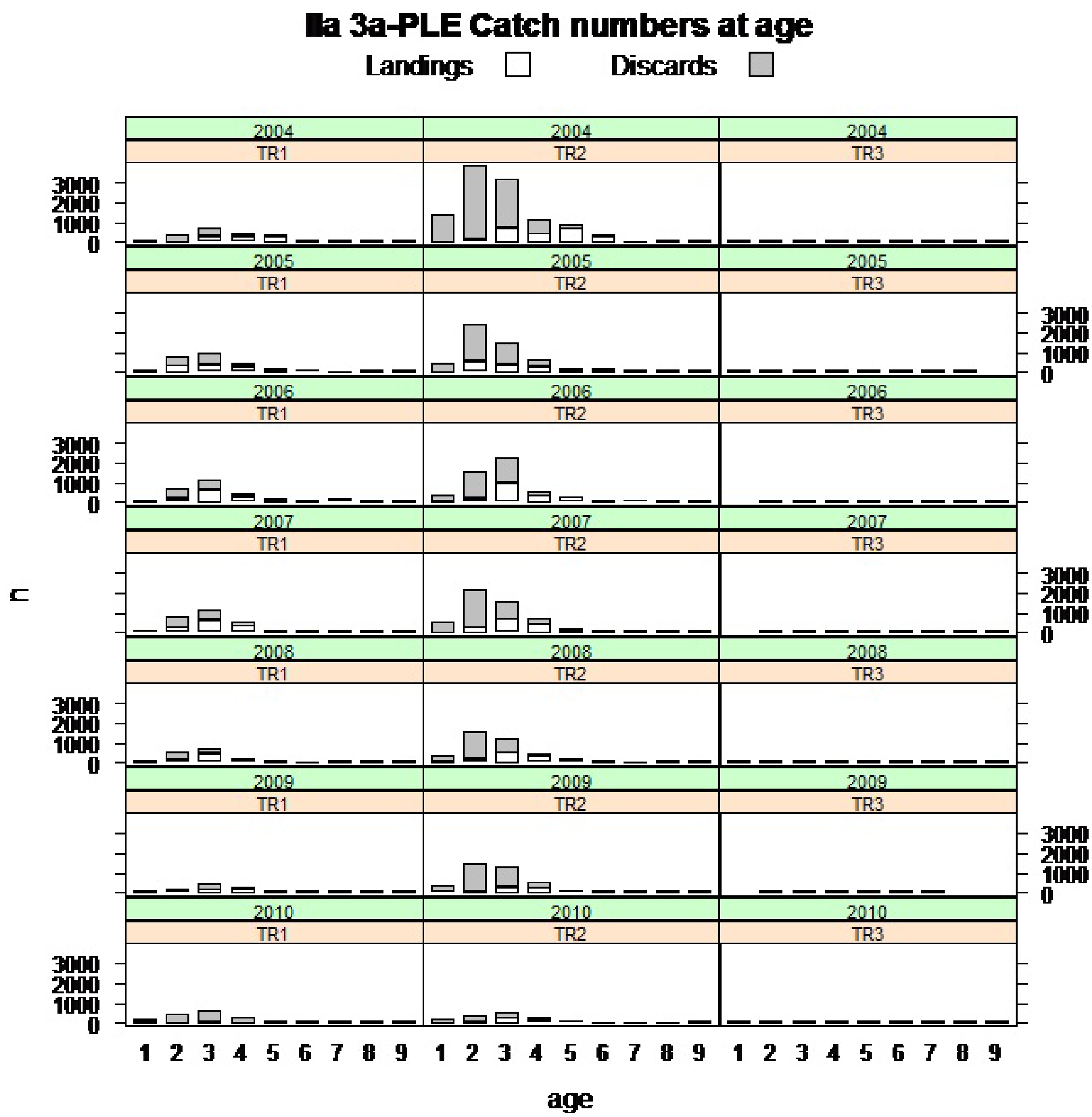


Fig 6.2.2.3 Landings and discards by age of Plaice in gear group TR1;TR2;TR3 in area 3a Kattegat 2004-2010. There was no Danish discard data for plaice in gear category TR2 2010 included in the figure. There was no time during the meeting to analyze the Danish discard data of plaice by age for TR2.

6.2.3. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod, sole and plaice in area 3A Kattegat

The Tables below show CPUE and LPUE of cod, plaice and sole between 2003-2010

Table 6.2.3.1 CPUE of cod, sole, plaice by gear 2004-2010 (g/kwd). There is no Danish discard data for TR2 CPart 13 on plaice and sole included in the tables.

ANNEX	SPECIES	REG AREA	REG GEAR	SPECON	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
IIa	COD	3a	GN1	none	251	162	159	219	345	93	84	175
IIa	COD	3a	GT1	none	538	146	68	86	73	25		33
IIa	COD	3a	LL1	none	449	94	108		555			546
IIa	COD	3a	TR1	none	903	734	289	613	156	261	48	163
IIa	COD	3a	TR2	CPART11						34	21	27
IIa	COD	3a	TR2	CPart13							64	64
IIa	COD	3a	TR2	none	490	307	370	256	136	73	129	110
IIa	COD	3a	TR3	none	54	29	100	23	46			24
IIa	PLE	3a	GN1	none	766	438	444	486	460	187	168	273
IIa	PLE	3a	GT1	none	1344	877	998	583	951	172	245	457
IIa	PLE	3a	TR1	none	2209	2401	3200	3110	1694	2305	2867	2094
IIa	PLE	3a	TR2	CPART11						96	60	77
IIa	PLE	3a	TR2	CPart13							104	104
IIa	PLE	3a	TR2	none	429	264	310	346	219	227	437	233
IIa	PLE	3a	TR3	none	19	14	3	13				
IIa	SOL	3a	GN1	none	230	642	641	494	444	509	480	479
IIa	SOL	3a	GT1	none	154	390	385	324	390	344	514	416
IIa	SOL	3a	TR1	none	19	42	78	66	27	18	12	22
IIa	SOL	3a	TR2	CPART11						22	8	14
IIa	SOL	3a	TR2	CPart13							54	54
IIa	SOL	3a	TR2	none	55	75	80	67	67	65	20	64

By including Danish TR2 Cpart 13 data for 2010 on plaice and sole gives the following CPUE estimates :Plaice **230** g/Kwd compared to 104 g/Kwd in table 6.2.3.1, Sole: **58** g/Kwd compared to 54g/Kwd in table 6.2.3.1

Note that the TR2 Cpart 13 CPUE of cod is lower than the CPUE of cod by TR2 none. However, the TR2 Cpart 11 CPUE of cod is however 32 % of the CPUE of cod for TR2 Cpart 13.

Table 6.2.3.2 LPUE of cod, sole, plaice by gear 2003-2010 (g/kwd)

ANNEX	SPECIES	REG AREA	REG GEAR	SPECON	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
IIa	COD	3a	GN1	none	398	251	162	159	219	345	93	84	175
IIa	COD	3a	GT1	none	482	538	146	68	86	73	25		33
IIa	COD	3a	LL1	none	2353	449	94	108		555			546
IIa	COD	3a	TR1	none	818	521	496	240	387	142	153	36	124
IIa	COD	3a	TR2	CPART11									
IIa	COD	3a	TR2	CPart13								35	35
IIa	COD	3a	TR2	none	326	232	175	180	135	88	45	91	70
IIa	COD	3a	TR3	none	121	54	29	100	23	46			24
IIa	PLE	3a	GN1	none	503	766	438	444	486	460	187	168	273
IIa	PLE	3a	GT1	none	1374	1344	877	998	583	951	172	245	457
IIa	PLE	3a	TR1	none	1048	1515	1659	2294	2048	1241	1665	641	1235
IIa	PLE	3a	TR2	CPART11							10	6	8
IIa	PLE	3a	TR2	CPart13								104	104
IIa	PLE	3a	TR2	none	317	186	133	193	171	137	108	119	124
IIa	PLE	3a	TR3	none	28	19	14	3	13				
IIa	SOL	3a	GN1	none	142	230	642	641	494	444	509	480	479
IIa	SOL	3a	GT1	none	121	154	390	385	324	390	344	514	416
IIa	SOL	3a	TR1	none	16	19	42	78	42	27	18	12	22
IIa	SOL	3a	TR2	CPART11								4	2
IIa	SOL	3a	TR2	CPart13								54	54
IIa	SOL	3a	TR2	none	26	39	68	76	63	62	62	17	60

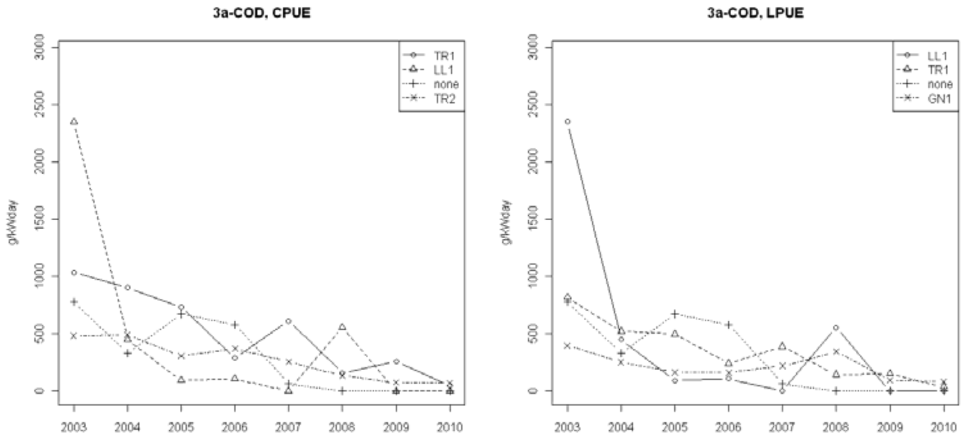


Figure 6.2.3.1 Left: CPUE of cod by gear category (no special condition). Right: LPUE of cod by gear category 2004-2010

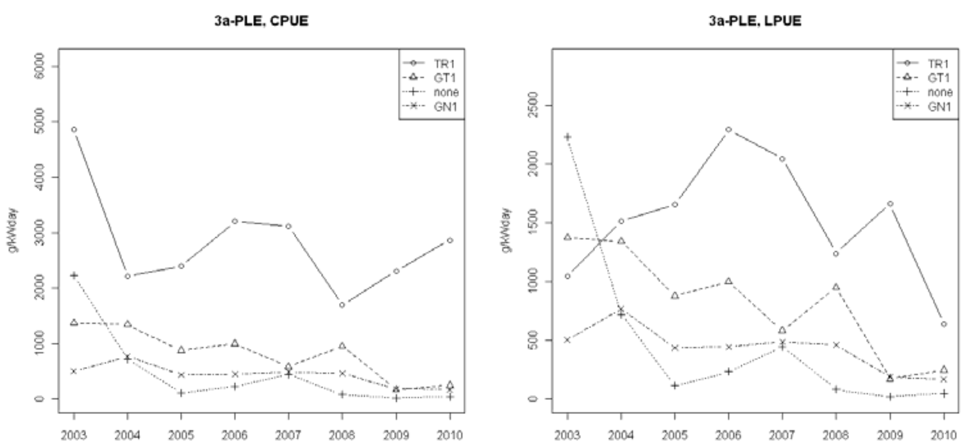


Figure 6.2.3.2 Left: CPUE of plaice by gear category (no special condition). Right: LPUE of plaice by gear category 2004-2010. There is no Danish discard information of TR2 on plaice included in the figure. When the Danish discard information is included, the CPUE of Plaice of TR2 2010 is **980** g/kwd, and hence TR2 would as in previous years report have been found in Figure 6.2.3.2.

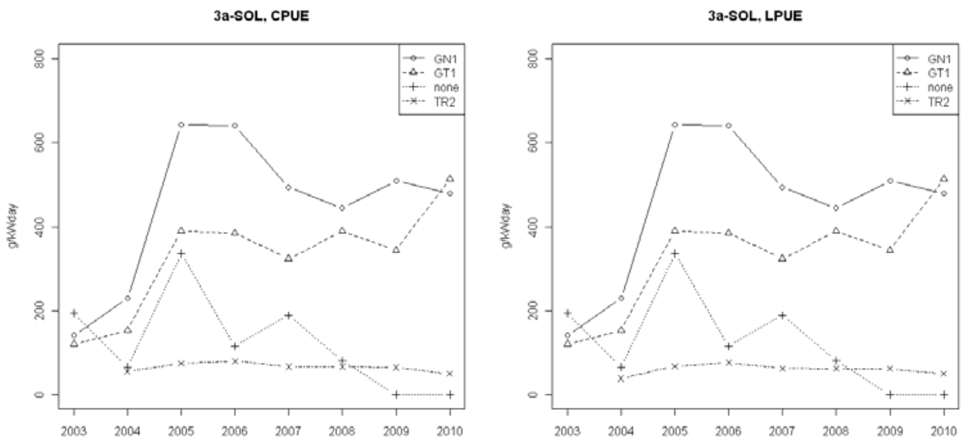


Figure 6.2.3.1. Left: CPUE of sole by gear category, right: LPUE of sole by gear category 2004-2010 There is no Danish discard information of TR2 on sole included in the figure. However, if included in the analyses the CPUE of sole in 2010 would rise to **47** (g/kwd) compared to 43 (g/kwd).

6.2.4. Ranked derogations

Rankings of gears of in terms of catches and landings are shown in Tables 6.2.4.1 and 6.2.4.2. In the case of both catches and landings, TR2 is the dominant gear accounting for over 88% of the total.

Table 6.2.4.1 Ranked gear Categories according to the proportional catches of Cod, Plaice and Sole 2003-2010 There is no Danish discard information of TR2 on sole and plaice included in the table.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel
IIa	3a	COD	TR2	0,83	0,88	0,83	0,91	0,83	0,82	0,83	0,93
IIa	3a	COD	GN1	0,03	0,02	0,02	0,02	0,03	0,08	0,05	0,05
IIa	3a	COD	TR1	0,09	0,08	0,13	0,04	0,13	0,06	0,11	0,02
IIa	3a	COD	GT1	0,01	0,01	0,01	0,00	0,00	0,01	0,00	0,00
IIa	3a	COD	LL1	0,01	0,00	0,00	0,00	0,00	0,02		
IIa	3a	COD	TR3	0,03	0,01	0,01	0,03	0,01	0,01	0,00	
IIa	3a	PLE	TR2	0,77	0,74	0,58	0,59	0,61	0,61	0,69	0,60
IIa	3a	PLE	TR1	0,20	0,19	0,35	0,35	0,35	0,30	0,27	0,35
IIa	3a	PLE	GN1	0,02	0,05	0,05	0,04	0,03	0,05	0,03	0,03
IIa	3a	PLE	GT1	0,01	0,01	0,02	0,02	0,01	0,03	0,01	0,01
IIa	3a	PLE	TR3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
IIa	3a	PLE	LL1	0,00							
IIa	3a	SOL	TR2	1,00	0,84	0,67	0,68	0,71	0,74	0,68	0,64
IIa	3a	SOL	GN1	0,00	0,12	0,27	0,24	0,20	0,18	0,26	0,26
IIa	3a	SOL	GT1	0,00	0,01	0,04	0,04	0,05	0,05	0,05	0,10
IIa	3a	SOL	TR1	0,00	0,02	0,02	0,04	0,04	0,02	0,01	0,01
IIa	3a	SOL	TR3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

Table 6.2.4.2 Ranked gear Categories according to the proportional landings of Cod, Plaice and Sole 2003-2010.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel
IIa	3a	COD	TR2	0,80	0,84	0,79	0,84	0,79	0,75	0,80	0,88
IIa	3a	COD	GN1	0,04	0,03	0,03	0,03	0,05	0,11	0,09	0,08
IIa	3a	COD	TR1	0,10	0,09	0,15	0,07	0,14	0,08	0,11	0,03
IIa	3a	COD	GT1	0,01	0,01	0,01	0,00	0,01	0,01	0,01	0,01
IIa	3a	COD	LL1	0,01	0,00	0,00	0,00	0,00	0,04		
IIa	3a	COD	TR3	0,04	0,02	0,02	0,05	0,01	0,02	0,00	
IIa	3a	PLE	TR2	0,78	0,62	0,48	0,54	0,52	0,56	0,57	0,77
IIa	3a	PLE	TR1	0,13	0,26	0,40	0,37	0,39	0,32	0,36	0,15
IIa	3a	PLE	GN1	0,06	0,09	0,07	0,06	0,06	0,07	0,05	0,06
IIa	3a	PLE	GT1	0,03	0,03	0,04	0,03	0,03	0,05	0,01	0,03
IIa	3a	PLE	TR3	0,01	0,01	0,01	0,00	0,00	0,00	0,00	0,00
IIa	3a	PLE	LL1	0,00							
IIa	3a	SOL	TR2	0,74	0,79	0,65	0,66	0,70	0,73	0,66	0,63
IIa	3a	SOL	GN1	0,19	0,16	0,28	0,25	0,21	0,20	0,28	0,26
IIa	3a	SOL	GT1	0,03	0,02	0,04	0,04	0,05	0,05	0,06	0,10
IIa	3a	SOL	TR1	0,03	0,02	0,02	0,04	0,03	0,02	0,01	0,01
IIa	3a	SOL	TR3	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00

Table 6.2.4.3 Ranked gear Categories including unregulated gears according to the proportional landings of Cod, Plaice and Sole 2003-2010.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel
IIa	3a	COD	TR2	0,78	0,83	0,77	0,8	0,77	0,74	0,75	0,86
IIa	3a	COD	GN1	0,04	0,03	0,03	0,03	0,05	0,11	0,08	0,08
IIa	3a	COD	TR1	0,1	0,09	0,14	0,06	0,14	0,08	0,11	0,03
IIa	3a	COD	OTTER	0,01	0,01	0,01	0,02	0,01	0,01	0,06	0,02
IIa	3a	COD	GT1	0,01	0,01	0,01		0,01	0,01	0,01	0,01
IIa	3a	COD	none			0,01	0,01				
IIa	3a	COD	PEL_TRAWL			0,01	0,02	0,01			
IIa	3a	COD	LL1	0,01					0,03		
IIa	3a	COD	TR3	0,04	0,02	0,02	0,05	0,01	0,02		
IIa	3a	PLE	TR2	0,77	0,62	0,48	0,53	0,52	0,56	0,57	0,76
IIa	3a	PLE	TR1	0,13	0,25	0,4	0,37	0,39	0,32	0,36	0,14
IIa	3a	PLE	GN1	0,05	0,09	0,07	0,06	0,06	0,07	0,05	0,06
IIa	3a	PLE	GT1	0,03	0,03	0,04	0,03	0,03	0,05	0,01	0,03
IIa	3a	PLE	none	0,01	0,01			0,01			0,01
IIa	3a	PLE	OTTER							0,01	0,01
IIa	3a	PLE	TR3	0,01	0,01	0,01					
IIa	3a	SOL	TR2	0,74	0,79	0,64	0,66	0,7	0,72	0,66	0,63
IIa	3a	SOL	GN1	0,19	0,16	0,28	0,25	0,21	0,19	0,28	0,26
IIa	3a	SOL	GT1	0,03	0,02	0,04	0,04	0,05	0,05	0,06	0,1
IIa	3a	SOL	TR1	0,03	0,02	0,02	0,04	0,03	0,02	0,01	0,01
IIa	3a	SOL	TR3	0,01							
IIa	3a	SOL	none	0,01		0,01		0,01			

The fishery in Kattegat is totally dominated by the gear category TR2 which contributes 80 % of the total effort, 88 % of the cod landed 86 % of the cod catches, 77 % of the plaice landed and 63 % of the sole landed in 2010.The unregulated gears do not have any larger share of proportions of landings of cod, sole and plaice.

If Danish discard data on plaice and sole in gear class TR2 would had been included, the proportion of catches by TR2 on those species would had been even more pronounced.

6.2.5. Unregulated gears in Kattegat

Table 6.2.5.1 and Figure 6.2.5.1 shows the effort by unregulated gear categories (defined in the new cod plan). Unspecified otter trawl and pelagic trawls are the most important gear types.

Table 6.2.5.1. Effort (Kwdays) of unregulated gear in Kattegat 2004-2010.

REG AREA COD	GEAR	2004	2005	2006	2007	2008	2009	2010	Rel 2004	Rel 2009
3a	DEM_SEINE		354							
	DREDGE	6461	33713	39802	50977	55259	36768	36517	5,65	0,99
	none	15212	8924	17261	15766	24584	47342	41620	2,74	0,88
	OTTER	205883	189643	258570	200213	157752	232709	75844	0,37	0,33
	PEL_SEINE	20680	25640	52976	32560	16157	11000	19876	0,96	1,81
	PEL_TRAWL	391770	448473	374703	349489	192363	378195	300799	0,77	0,80
	POTS	85806	65450	75311	86516	75233	64289	29897	0,35	0,47
Total effort		**725812**	**772197**	**818623**	**735521**	**521348**	**770303**	**504553**	**0,70**	**0,66**

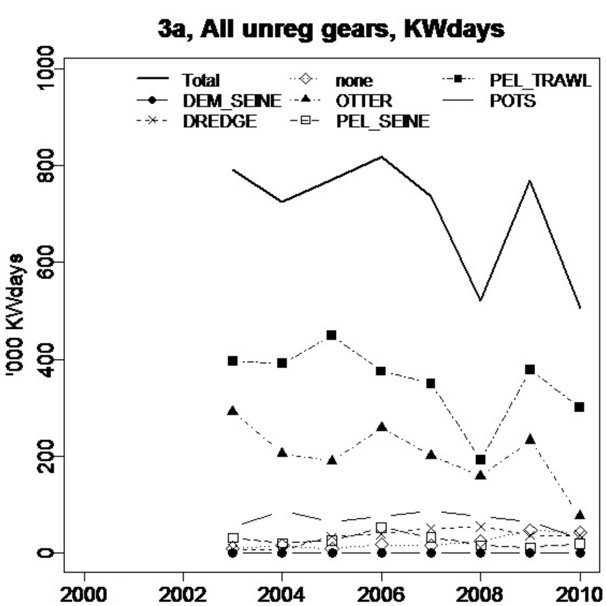


Figure. 6.2.5.1 Effort by unregulated gear in Kattegat 2000-2010.

Catches of cod, sole and plaice by unregulated gears are given in Tables 6.2.5.2 to 6.2.5.4 respectively.

The main unregulated gears are pelagic trawls (targeting herring and sprat) and otter in the mesh size range of 32-54 mm targeting Pandalus. The effort of Pandalus fishery varies between years and is located to the northern deeper parts of the Kattegat.

Table 6.2.5.2. Kattegat Catch of cod by unregulated gears 2004-2010. There is no Discard data available for unregulated gears.

Annex	Species	Gear	Country	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
IIa	COD	DEM_SEINE	DEN	0	0	0	0	0	0	0
IIa	COD	None	DEN	5	6	10	1	0	0	0
IIa	COD	None	SWE	0	0	0	0	0	0	0
IIa	COD	OTTER	DEN	7	7	14	1	0	0	0
IIa	COD	OTTER	SWE	1	5	4	5	4	9	3
IIa	COD	PEL_TRAWL	DEN	3	5	15	1	0	0	0
IIa	COD	PEL_TRAWL	SWE	0	0	0	4	0	0	0
IIa	COD	POTS	DEN	0	0	0	0	0	0	0
IIa	COD	POTS	SWE	0	0	0	0	0	0	0

Table 6.2.5.3. Kattegat Catch of sole by unregulated gears 2004-2010. . There is no Discard data available for unregulated gears.

Annex	Species	Gear	Country	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
IIa	SOL	DEM_SEINI	DEN	0	0	0	0	0	0	0
IIa	SOL	None	DEN	1	2	2	3	1	0	0
IIa	SOL	OTTER	DEN	0	0	1	0	0	0	0
IIa	SOL	OTTER	GER	0	0	0	0	0	0	0
IIa	SOL	OTTER	SWE	0	0	0	0	0	0	0
IIa	SOL	PEL_TRAW	DEN	0	0	0	0	0	0	0
IIa	SOL	POTS	DEN	0	0	0	0	0	0	0

Table 6.2.5.4. Kattegat Catch of plaice by unregulated gears 2004-2010. . There is no Discard data available for unregulated gears.

Annex	Species	Gear	Country	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
IIa	PLE	DEM_SEINI	DEN	0	1	0	0	0	0	0
IIa	PLE	None	DEN	11	1	4	7	2	1	2
IIa	PLE	OTTER	DEN	0	1	4	2	1	0	0
IIa	PLE	OTTER	GER	0	0	0	0	0	0	0
IIa	PLE	OTTER	SWE	0	0	1	1	1	3	2
IIa	PLE	PEL_TRAW	DEN	0	0	0	0	0	0	0
IIa	PLE	POTS	DEN	0	0	0	0	0	0	0

The total amount of the landings of cod, plaice and sole by the unregulated gears is less than 1% of the total amount of the landings.

6.2.6. Information on under 10m vessels

Landings of cod plaice and sole by vessels under 10m is presented in Table 6.2.6.1 The total amount of the landings of Cod Plaice and Sole by the vessels under 10 m gears has varied, between 10 and 20% of the total amount of the catch for cod and plaice and 25-37% for sole (Table 6.2.6.2).

Table 6.2.6.1 Landings (t) of cod, plaice and sole by vessels under 10m, 2004-2010.

Species	Gear	2004 L	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L
COD	GN1	17	24	31	21	8	5	7
	GT1	0	1	2	1	2	4	3
	LL1	1	2	6	7	1	0	
	none	129	99	114	44	25	20	10
	TR1		0	2	2	0	0	0
	TR2	2	1	3	2	1	0	1
COD Total		**149**	**127**	**158**	**77**	**37**	**29**	**21**
PLE	GN1	31	31	42	46	26	19	14
	GT1	3	7	12	13	10	25	13
	none	243	183	207	189	119	90	68
	TR1		2	1	11	0	0	0
	TR2	14	2	11	16	11	14	15
PLE Total		**291**	**225**	**273**	**275**	**166**	**148**	**110**
SOL	GN1	4	24	23	15	19	17	24
	GT1	0	6	10	10	10	12	10
	none	73	173	152	104	91	88	79
	POTS		0	1	0	0	0	0
	TR1		2	0	1	0	0	0
	TR2	1	2	7	9	9	11	13
SOL Total		**78**	**207**	**193**	**139**	**129**	**128**	**126**

Table 6.2.6.2 Percentage of total landings of cod, sole and plaice by vessels under 10m 2004-2010.

	2004	2005	2006	2007	2008	2009	2010
COD	11%	13%	17%	12%	8%	15%	14%
PLE	19%	19%	18%	20%	16%	22%	23%
SOL	28%	35%	32%	32%	31%	34%	37%

Vessels under 10 m are landing an increasingly large part of the percentage of cod sole and plaice. These segments of the fleet are unregulated in terms of their kilowatt days and may need to be evaluated especially due to the increasing proportion of landings and the possibilities to escape the restrictive effort limiting system..

6.2.7 Spatial distribution patterns of effective effort.

Kattegat is a rather small management area to find any changes in the pattern of the distribution of effort between the gears using statistical rectangles. A smaller grid would be required in order to pick up any spatial changes in this area.

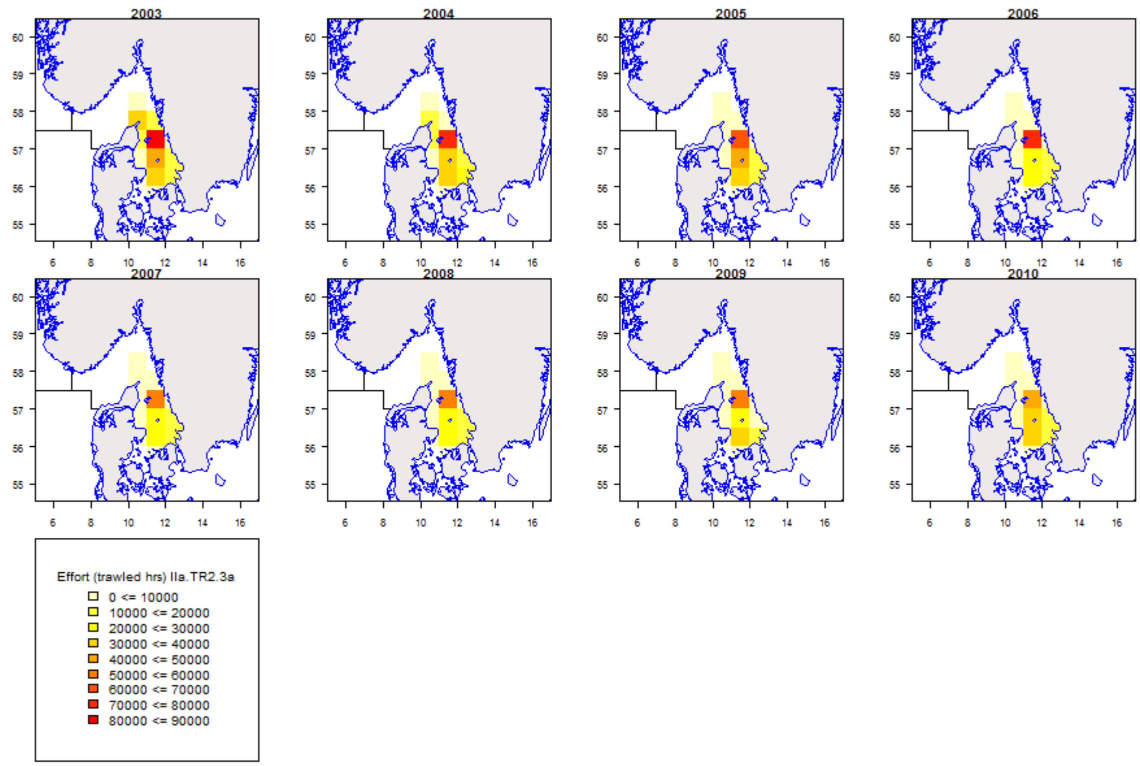
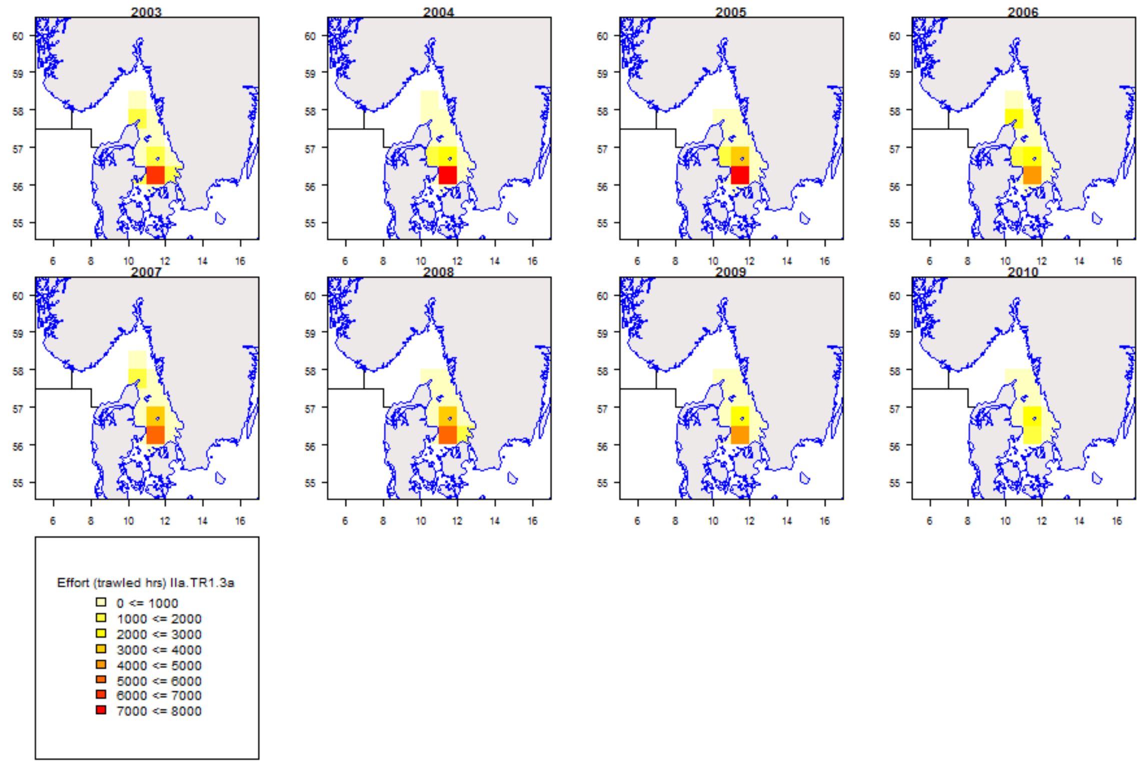
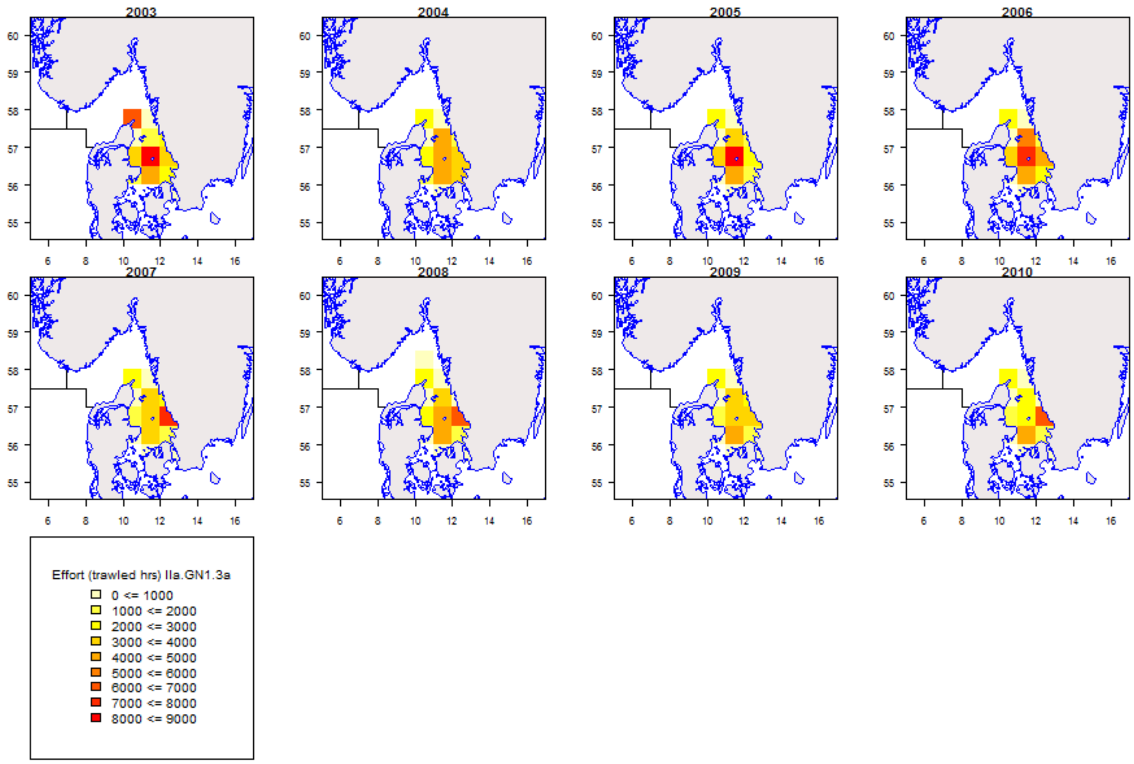


Figure 6.2.7.1. Spatial distribution of TR2 effort in Kattegat.



6.2.7.2. Spatial distribution of TR1 effort in Kattegat



6.2.7.3. Spatial distribution of GN1 effort in Kattegat

6.2.8 Fully documented fisheries in the Kattegat (NOTE ONLY ONE VESSEL!!!!)

In Kattegat there is one Swedish vessel participating in a trial with fully documented fishery.

The trial had been conducted only for quarter 3 and 4 2010 and are hence in a early stage. Absolute data values are not provided in this case.

The Swedish vessel are fishing in the gear category TR2 none and TR2 Cpart 11. The nominal effort deployed by the Swedish FD vessel is 1 % of the total Swedish effort deployed in the gear category TR2 Cpart 11 and 7 % of the total Swedish effort in gear category TR2 none.

Table 6.2.8.1 The proportion of cod, Nephrops, plaice and sole in the FD trials landed by their respective gear group

		COD	NEP	PLE	SOL
TR2	CPart11	0	0,3%	0,2%	0%
TR2	none	3%	5%	7%	9%

The low proportion of species landed by the fully documented fishery vessel primarily reflect the low number of vessels (1) and the short time that the trial has been conducted

6.3. Management area 3b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

This section summarizes all the information collected for the management area covering the North Sea, the Skagerrak and the Eastern English Channel. In the current “cod plan” regulation (Council Regulation 43/2009) this area is referred to as management areas 3b. For ease of comparison with previous reports, it should be noted that, in the regulation that preceded 43/2009 (i.e. Annex II of Council Regulation 40/2008) this area was referred to as area 2b.

6.3.1. Trend in effort by derogation in management area 3b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Catch and effort data including special conditions in force since 2009 (CPart11 and CPart13) have been provided by all Member States with significant fishing activity in this area. As such, the data are considered to represent a complete account of fishing effort by regulated gears in the area as reported by national administrations. As a result, any inconsistencies or problems in the data arise from the data as reported rather than the subsequent compilation by the working group. In the current dataset and as last year, there is a particular issue with the data for 2002 when the reported effort by French vessels is substantially higher than in other years. This appears anomalous but does not affect perception of more recent trends in effort; times series are accordingly displayed from 2003 on only. In many cases the French data for 2009 are identical or very close to the corresponding figures for 2008, hence the 2009 figures should still be regarded as preliminary; they have not been revised this year.

Information on nominal effort (KWDays) by regulated and unregulated gears in the Skagerrak, North Sea (incl. 2EU) and the Eastern Channel are listed by country in Table 6.3.1.1 for the current cod plan categories. Additional information including GTdays and numbers of vessels or the extended time series can be found on the STECF website.

Information related to the Fully Documented Fishery (FDF) is dealt with specifically in section 6.3.8 further below.

Trends in nominal aggregated effort in kilowatt-days by overall gear category according to Annex IIa of Council Regulations 43/2009 and 23/2010 are given in Tables 6.3.1.2 and shown in Figure 6.3.1.1. Data are presented as aggregate totals for the whole of area 3b, and do not thus distinguish between the various sub-areas. A more detailed analysis of unregulated gears is presented in section 6.3.5.

Overall, regulated gears represent around 70% of the total effort in area 3b. The main gears in management area 3b are demersal trawls/seines and beam trawls (51% and 42% of total 2010 regulated effort respectively). Nominal effort by both of these gear types has shown a decrease since 2003, and this is reflected in the decrease in total effort over the same period. However, beam trawling effort has remained constant since 2008.

Figures 6.3.1.2–6.3.1.6 show effort totals by mesh size category within the regulated gear types.

Figure 6.3.1.2 shows trends in nominal effort (kW*days) by demersal trawls / seines by regulated mesh size category. The overall effort by these gears has shown a reduction since 2003. Subsequently, effort by larger mesh (TR1) has been relatively stable whereas smaller mesh (TR2) effort has shown a general decline. These global trends hide however major differences from country to country (Table 6.3.1.1): While TR1 effort has globally decreased in Denmark, Sweden and France, it has remained fairly stable in the UK and Germany, and has strongly increased over recent years in countries traditionally operating less with these gears, Belgium and the Netherlands. There seems to have been some KWDays transfer from BT gears to TR gears for Netherlands, and from area 3c to area 3b for Belgium. In TR2, many countries reduced their effort by 5 to 15% between 2009 and 2010. Though, a large part of the overall effort decrease is due to the important effort reduction reported by France.

It is sometimes difficult to interpret these aggregated trends, because the current grouping covers many different fisheries. TR2 in particular gathers as different fisheries as e.g. *Nephrops* trawling, mainly in the Northern North Sea, and whiting trawling in the SouthWestern North Sea, and these local fisheries may follow different dynamics.

In 2009, all Scottish and English effort by TR gears was allocated to Special Condition CPart13, and all Swedish effort by TR2 gears was allocated to CPart11. This continued in 2010. In addition, a small amount of Scottish effort granted under CPart11 was observed in area 3b. For German vessels, 50% of TR1 effort was allocated to CPart13, and for TR2 this share increased from 1% in 2009 to 9% in 2010.

For beam trawls, 95% of the regulated effort takes place in small mesh size BT2. The data indicate a general reduction in beam trawl effort since at least 2003 (Figure 6.3.1.3).Effort in BT2 has decreased by 4% between 2009 and 2010. Not all of the data for the major Dutch and Belgian fleets could be assigned to mesh size, though based on expert knowledge the large majority of this effort has been assigned to the 80-89mm mesh size category (regulated gear BT2). For Belgium though, this applies only for the years prior to 2007, since the actual mesh size used has been correctly registered since 2007.

The share of static gears effort has been stable over the period, around 6-7% of the total regulated effort deployed in the Skagerrak, North Sea (incl. 2EU) and Eastern Channel. STECF- notes that the fishing activities for static gears may be poorly quantified by nominal effort (kW*days at sea). With that caveat, usage of gillnets (Figure 6.3.1.4) has remained relatively stable in recent years, while the usage of Trammel nets (Fig. 6.3.1.5). and longlines has decreased in 2010 compared to 2009, and the overall level of effort is still very low.

Table 6.3.1.1 Area 3b: Trend in nominal effort (Kw *days at sea) by Gear group, country and specon, 2004-2010 (the extended time series is available on the STECF website).

reg.gear	country	specon	2004	2005	2006	2007	2008	2009	2010	Rel 04-06	Rel 2009
BT1	BEL	none	1439951	1509759	1333012	1320169	987634	575501	486680	0.34	0.85
	DEN	none	1366044	1316858	788891	856617	449199	413427	569744	0.49	1.38
	ENG	none	671129	618160	1321240	305837	228530	265710	202685	0.23	0.76
	FRA	none									
	GER	none	31698	2128	53986	30297	17674		884	0.03	
	NED	none	814723	856823	1598963	828513	392987	439835	488309	0.45	1.11
	NIR	none	543305	36825							
	SCO	none	694716	730810	603091	349914	68568	53082			
BT2	BEL	none	6717425	5952619	6201205	5891626	6228335	5531728	4368821	0.69	0.79
	DEN	none	87890	100871	92798	104694	39730	78215	3678	0.04	0.05
	ENG	none	4230884	4470070	3333673	3576089	2343694	2891909	3528676	0.88	1.22
	FRA	none	1372579	994258	1324297	1238613	1194714	1194714	610829	0.50	0.51
	GBJ	none	14375	10346							
	GER	none	2080593	2212397	1927398	1590823	1464163	1666322	1801775	0.87	1.08
	NED	none	45326214	45000599	39370689	38450313	27720830	28729727	28648855	0.66	1.00
	NIR	none	47517	16785							
	SCO	none	4610314	4185264	3109683	2800641	1354776	560729	144306	0.04	0.26
GN1	BEL	none	171233	167853	151507	129532	168969	181261	196692	1.20	1.09
	DEN	none	2503663	2355996	2086597	1234706	1328785	1475494	1567471	0.68	1.06
	ENG	none	362508	308493	311045	182202	75938	188216	189550	0.58	1.01
	FRA	none	406304	289076	332356	448038	198741	197488	100810	0.29	0.51
	GER	none	163665	273203	236585	152633	281182	235144	276024	1.23	1.17
	NED	none	416025	387945	512022	521697	507733	419797	357091	0.81	0.85
	SCO	none	197407	165644	293823	320785	417076	376332	440579	2.01	1.17
	SWE	none	127286	89748	76409	58618	96877	101209	67326	0.69	0.67
GT1	BEL	none				42078	34200	12430	41780		3.36
	DEN	none	246854	240716	184802	98425	126223	197308	178830	0.80	0.91
	ENG	none	10306	14525	17181	10999	22498	18440	25367	1.81	1.38
	FRA	none	3426003	4121419	5467522	5292713	3621742	3617988	2431158	0.56	0.67
	GER	none			1547			15444	1188	0.77	0.08
	NED	none					740	26917	37399		1.39
	SWE	none	16206	27824	56771	62309	63022	36250	21260	0.63	0.59
LL1	BEL	none					1768		3047		
	DEN	none	85345	44687	45289	18078	27772	30722	48293	0.83	1.57
	ENG	none	115019	182590	95139	53675	45863	42923	57724	0.44	1.34
	FRA	none	163370	97311	114742	162573	216282	216282	166766	1.33	0.77
	NIR	none									
	SCO	none	4350	0	7542	1487	276674	620890	301689	76.11	0.49
	SWE	none	44221	42904	123481	165019	53381	11352	6600	0.09	0.58

(ctd next page)

Table 6.3.1.1 (ctd)

reg.gear	country	specon	2004	2005	2006	2007	2008	2009	2010	Rel 04-06	Rel 2009
TR1	BEL	none	1989			161520	201379	220428	220777	111.00	1.00
	DEN	none	7154017	7853341	7402801	5385763	5347921	5120432	3933189	0.53	0.77
	ENG	CPART13						2145727	1685226		0.79
	ENG	none	1498089	1256186	1824680	1501767	1851664				
	FRA	none	2348974	1961936	2724981	2642190	2787798	2696190	2004742	0.85	0.74
	GBJ	none									
	GER	CPART13						927872	918707		0.99
	GER	none	1719696	2166578	2436727	2041064	1774792	891953	912558	0.43	1.02
	IRL	none									
	NED	none	593232	547564	532260	648039	1411644	1323312	1415882	2.54	1.07
	NIR	CPART13						56140	29360		0.52
	NIR	none	16948	70711	51951	61460	49104				
	SCO	CPART13						12245575	10444829		0.85
	SCO	none	12684328	12158294	11661338	11022980	12176291				
	SWE	none	470803	496754	292520	357841	426261	255594	207882	0.49	0.81
TR2	BEL	none	546386	354543	390268	312570	441190	553209	638857	1.48	1.15
	DEN	none	8088391	5913518	4689098	3433945	3310190	3394115	3189707	0.51	0.94
	ENG	CPART13						1910232	1720026		0.90
	ENG	none	1976703	2187597	1892451	1769650	1959629				
	FRA	none	14841436	13427913	15043571	14787652	12000527	11759062	8070194	0.56	0.69
	GBG	none									
	GBJ	CPART13						7480			
	GBJ	none	20201	24143	10560	13420	9680				
	GER	CPART13						2420	39820		16.45
	GER	none	905330	704404	771597	680681	457259	471414	424525	0.53	0.90
	IOM	none									
	IRL	none	884								
	NED	none	1813096	1643732	1512140	1819497	2482280	1937751	1936340	1.17	1.00
	NIR	CPART13						385631	398498		1.03
	NIR	none	12440	221904	532885	758972	409182				
	SCO	CPART11							97359		
	SCO	CPART13						8344074	8205442		0.98
	SCO	none	9486074	9108230	8677821	8887263	9195955				
	SWE	CPART11						766754	699160		0.91
	SWE	none	1955220	1972039	2116735	2055318	2100952	781107	661331	0.33	0.85
TR3	BEL	none					663		3536		
	DEN	none	3226366	2586161	1822500	846368	939474	607063	1077111	0.42	1.77
	ENG	none	7840	3315	6360	1472	492	82	718	0.12	8.76
	FRA	none	81511	106826	115612	138596	67827	66507	148174	1.46	2.23
	GER	none			772	884	4410	426			
	NED	none	45942	43261	20649	20589	4038	274	31973	0.87	116.69
	SCO	none	5460	2356	116	11896		33117	27524	10.41	0.83
	SWE	none	3330	1564	588	919			1986	1.09	
TOTAL			148013808	141637376	135704267	125662029	109466902	107326727	96517319	0.68	0.90

Table 6.3.1.2 Area 3b: Trend in nominal effort (Kw *days at sea) by Gear group. 2004-2010 (the extended time series is available on the STECF website).

reg.gear	specon	2004	2005	2006	2007	2008	2009	2010	Rel 04-06	Rel 2009
BT1	none	5561566	5071363	5699183	3691347	2144592	1747555	1748302	0.32	1.00
BT2	none	64487791	62943209	55359743	53652799	40346242	40653344	39106940	0.64	0.96
GN1	none	4348091	4037958	4000344	3048211	3075301	3174941	3195543	0.77	1.01
GT1	none	3699369	4404484	5727823	5506524	3868425	3924777	2736982	0.59	0.70
LL1	none	412305	367492	386193	400832	621740	922169	584119	1.50	0.63
TR1	CPART13	0	0	0	0	0	15375314	13078122		0.85
	none	26488076	26511364	26927258	23822624	26026854	10507909	8695030	0.33	0.83
TR2	CPART11	0	0	0	0	0	766754	796519		1.04
	CPART13	0	0	0	0	0	10649837	10363786		0.97
	none	39646161	35558023	35637126	34518968	32366844	18896658	14920954	0.40	0.79
TR3	none	3370449	2743483	1966597	1020724	1016904	707469	1291022	0.48	1.82
Grand Total		**148013808**	**141637376**	**135704267**	**125662029**	**109466902**	**107326727**	**96517319**	0.68	0.90
unregulated		63834341	56812244	50071214	46812652	41718521	45533963	43764681	0.77	0.96
Total all gears		211848149	198449620	185775481	172474681	151185423	152860690	1.4E+08	0.71	0.92
% regulated		0.70	0.71	0.73	0.73	0.72	0.70	0.69		

As a quality check, STECF routinely compares the data currently submitted with the data submitted during the previous year, as is displayed in table 6.3.1.3. Compared to the data submitted in 2010, Belgium has (sometimes significantly) re-evaluated downwards its figures by correcting for some original duplication of some records, while Sweden has slightly re-evaluated upwards its figures for gillnets and trammel nets.

Table. 6.3.1.3 Area 3b: Relative change in nominal effort 2011 data submission compared to 2010 submission (Kw *days at sea) by gear, derogation and country 2000-2009.

ANNEX	REG AREA	REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
IIa	3b	BT1	BEL	0	0	0	0	0	0	0	-0.5	-0.499	-0.44
IIa	3b	BT1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT1	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT1	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT1	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	BEL	0	0	0	0	0	0	0	-0.269	0	-0.051
IIa	3b	BT2	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3b	BT2	SCO	0	0	0	0	0	0	0	0	0	0

Table. 6.3.1.3 Area 3b (ctd)

ANNEX	REG AREA	REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
IIa	3b	GN1	BEL	0	0	0	0	0	0	0	-0.035	0	-0.021
IIa	3b	GN1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	GN1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	GN1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	GN1	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	GN1	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	GN1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3b	GN1	SWE	0	0	0	0	0	0	0	0	0	0.238
IIa	3b	GT1	BEL	0	0	0	0	0	0	0	0	0	-0.048
IIa	3b	GT1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	GT1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	GT1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	GT1	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	GT1	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	GT1	SWE	0	0	0	0	0	0	0	0	0	0.025
IIa	3b	LL1	BEL	0	0	0	0	0	0	0	0	-0.2	0
IIa	3b	LL1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	LL1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	LL1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	LL1	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3b	LL1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3b	LL1	SWE	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	BEL	0	0	0	0	0	0	0	0	0	-0.033
IIa	3b	TR1	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR1	SWE	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	BEL	0	0	0	0	0	0	0	0	0	-0.039
IIa	3b	TR2	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	GBG	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	IOM	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR2	SWE	0	0	0	0	0	0	0	0	0	0.004
IIa	3b	TR3	BEL	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	GER	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	NED	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3b	TR3	SWE	0	0	0	0	0	0	0	0	0	0

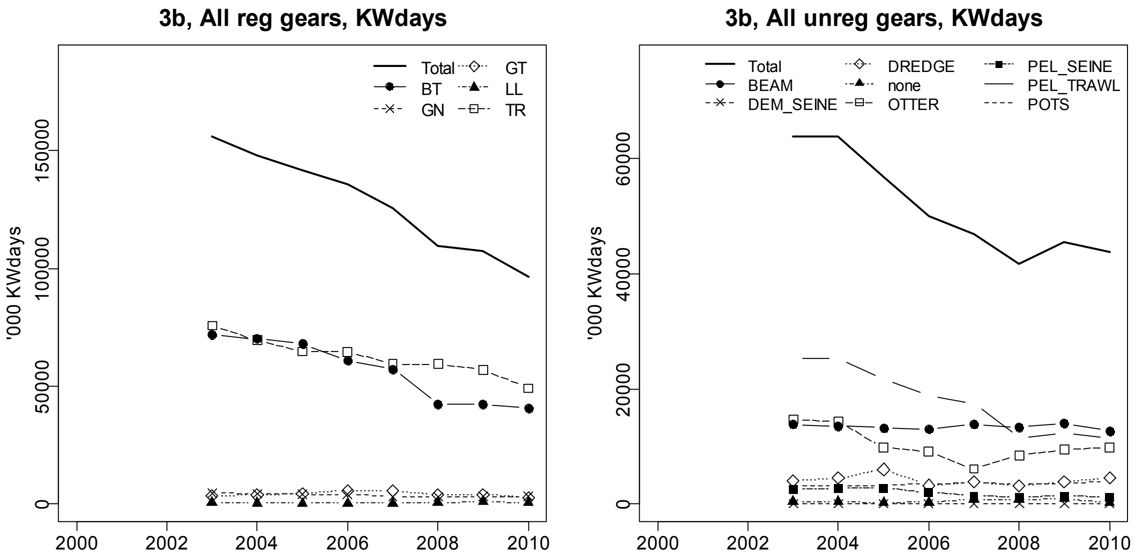


Figure 6.3.1.1. Effort trends for regulated (left) and unregulated (right) gear types. TR = demersal otter trawl and demersal seine, BT = Beam trawl, GN = Gillnet, GT = Trammel net, LL = Longline.

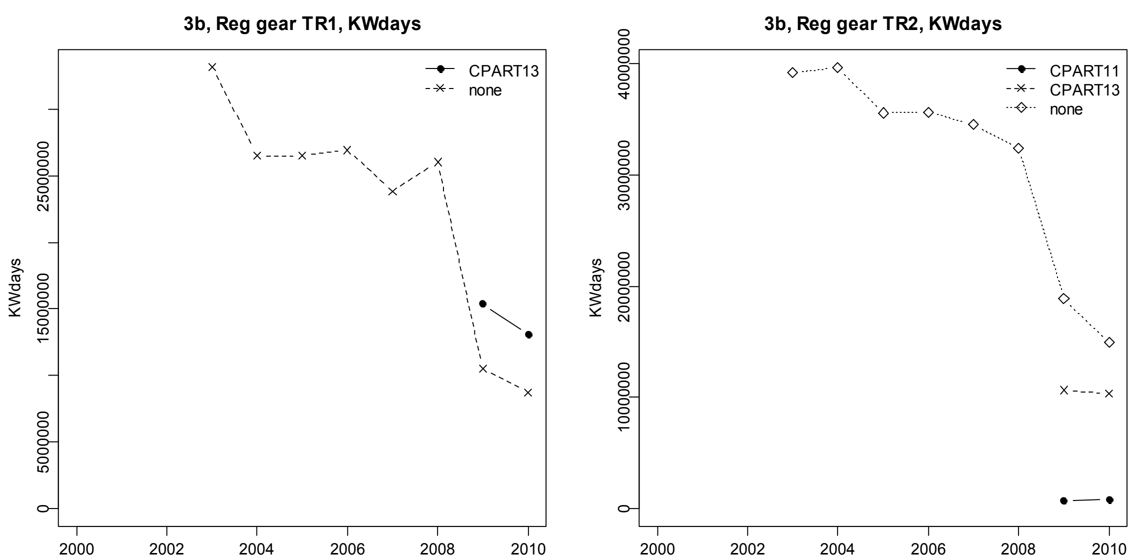


Figure 6.3.1.3. Effort trends for TR1 and TR2 disaggregated by special condition.

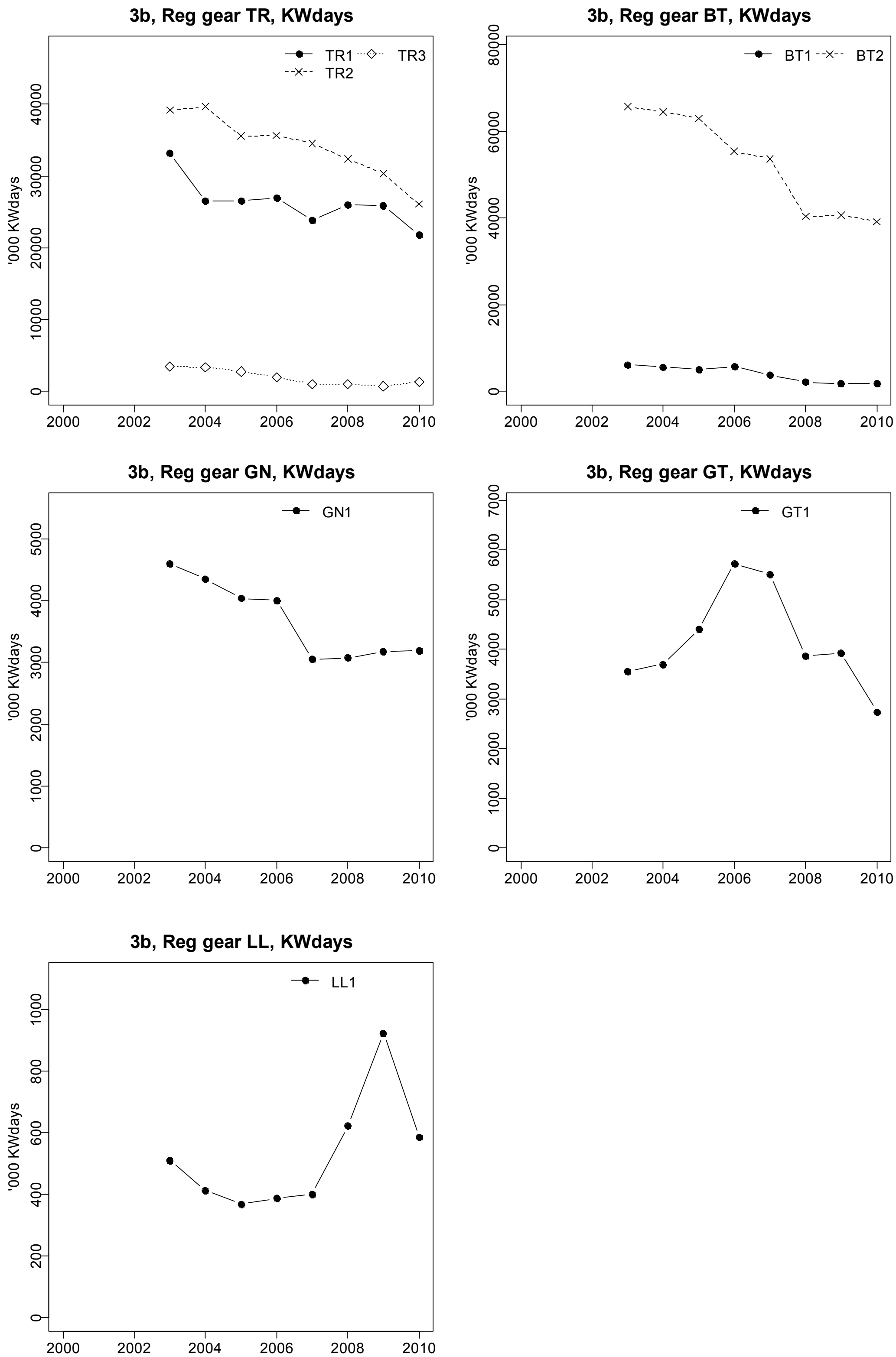


Figure 6.3.1.2. Effort separated by each individual regulated gear type.

6.3.2. Trend in catch estimates in weight and numbers at age by derogation in management area 3b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Estimated landings and discards of cod, haddock, whiting, anglerfish, saithe, hake, *Nephrops*, plaice and sole by cod plan gear category for the whole area are given in Table 6.3.2.1. Detailed data on age compositions of landings and discards of cod, plaice and sole are not given in a table here, but are available on the web site.

Information related to the Fully Documented Fishery (FDF) is dealt with specifically in section 6.3.8 further below.

As for the report of 2009, a number of figures are included in this report, displaying total landings (white) and discards (grey – when available) in weight for all regulated gears from 2004 to 2010 (Figures 6.3.2.1), as well as in landings and discards in numbers at age for cod, plaice and sole (Figures 6.3.2.2 to 6.3.2.10).

Because of the limited availability and reliability of discard information for some species and from some countries contributing substantially to landings, care is required in the use of these data to draw firm conclusions about catch composition. In addition, the procedure used to raise discards and explained in section 5 may not be fully consistent with the procedures used in other contexts and therefore may not be directly comparable. In particular, the very large whiting discards estimated for 2010 relates to averaged discards rates allocated to the large French landings in area VIId rather than actual observations, which are missing in this area.

In TR1, cod landings have been increasing since 2008, and discards rates have also decreased. Haddock and saithe landings have slightly decreased, while plaice landings have increased. Whitefish landings in TR2 are globally low and *Nephrops* landings have slightly decreased in 2010 compared to 2009. Catches of plaice and sole have significantly decreased in BT2 in the period 2004 – 2008. From 2009 landings for plaice are increasing, while for sole there is no clear trend. No clear trends were observed for GT1 with regards to sole, plaice and cod. Finally, cod landings in GN1 have also increased since 2008. The high discards rates observed for plaice in 2009 in GN1 could not be fully explained during the WG, but seem rather like an artefact of the raising procedure rather than a true pattern.

Age composition plots show high discarding of young cod ages 1 and 2 in 2006 and 2007, mostly in TR2 gear, corresponding to the year class 2005. But lower discard rates in 2008, 2009 and 2010 were observed, in spite of the fact that ICES (2011) estimated a slightly higher year class in 2007. This corresponds to ICES's indication that discarding have reduced over the recent years.

Table 6.3.2.1 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Landings (t), discards (t) and relative discard rates in weight by species and regulated gear, 2004-2010. DATA FOR OTHER SPECIES ARE AVAILABLE ON stecf WEBSITE.

species	gear	specon	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
ANF	**BT1**	none	381	0	0	359	0	0	201	14	0.07	207	0	0	163	1	0.01	110	0	0	92	0	0
ANF	**BT2**	none	95	6	0.06	81	14	0.15	70	7	0.09	88	9	0.09	91	7	0.07	91	31	0.25	183	30	0.14
ANF	**GN1**	none	969	0	0	938	0	0	1092	0	0	1289	0	0	1464	0	0	1466	0	0	1354	0	0
ANF	**GT1**	none	20	0	0	2	0	0	3	0	0	1	0	0	1	0	0	6	0	0	4	0	0
ANF	**LL1**	none	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANF	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5737	0	0	4003	0	0
ANF	**TR1**	none	5502	404	0.07	7111	722	0.09	6952	494	0.07	7445	443	0.06	7677	346	0.04	1321	12	0.01	970	10	0.01
ANF	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0
ANF	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1227	0	0	1224	0	0
ANF	**TR2**	none	1890	2	0	1944	8	0	1861	27	0.01	1728	31	0.02	1856	25	0.01	363	1	0	260	1	0
ANF	**TR3**	none	98	0	0	27	0	0	11	0	0	11	0	0	2	0	0	0	0	0	0	0	0
Total ANF			**8955**	**412**	**0.04**	**10462**	**744**	**0.07**	**10191**	**542**	**0.05**	**10769**	**483**	**0.04**	**11254**	**379**	**0.03**	**10321**	**44**	**0.00**	**8099**	**41**	**0.01**
COD	**BT1**	none	1183	0	0	1121	0	0	1000	335	0.25	689	0	0	337	212	0.39	230	0	0	322	0	0
COD	**BT2**	none	2415	1427	0.37	2198	749	0.25	2260	434	0.16	2085	218	0.09	2619	940	0.26	2332	422	0.15	1849	278	0.13
COD	**GN1**	none	4038	3	0	3741	10	0	3227	0	0	2422	0	0	2518	0	0	2873	0	0	3169	215	0.06
COD	**GT1**	none	341	0	0	342	0	0	345	0	0	346	0	0	374	0	0	469	0	0	409	1	0
COD	**LL1**	none	127	0	0	133	0	0	229	0	0	183	0	0	207	0	0	127	0	0	287	0	0
COD	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9970	6055	0.38	12340	3094	0.2
COD	**TR1**	none	10726	1745	0.14	12147	2025	0.14	11867	2924	0.2	10959	6886	0.39	12945	17518	0.58	7847	1927	0.2	6748	1605	0.19
COD	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	3	80	0.96
COD	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	537	1312	0.71	610	1243	0.67
COD	**TR2**	none	3767	3573	0.49	3442	3294	0.49	3074	4760	0.61	3112	8184	0.72	2922	4586	0.61	2788	3516	0.56	2532	3237	0.56
COD	**TR3**	none	28	0	0	31	0	0	30	0	0	4	0	0	58	0	0	2	0	0	18	0	0
Total COD			**22625**	**6748**	**0.23**	**23155**	**6078**	**0.21**	**22032**	**8453**	**0.28**	**19800**	**15288**	**0.44**	**21980**	**23256**	**0.51**	**27175**	**13236**	**0.33**	**28287**	**9753**	**0.26**

Table 6.3.2.1 cont

species	gear	specon	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
HAD	**BT1**	none	304	0	0	127	0	0	80	2	0.02	118	0	0	54	0	0	34	0	0	33	0	0
HAD	**BT2**	none	127	6	0.05	59	15	0.2	14	3	0.18	15	2	0.12	19	9	0.32	11	0	0	19	0	0
HAD	**GN1**	none	165	0	0	97	0	0	77	0	0	57	0	0	48	0	0	37	0	0	67	0	0
HAD	**GT1**	none	4	0	0	2	0	0	1	0	0	1	0	0	1	0	0	2	0	0	1	0	0
HAD	**LL1**	none	20	0	0	24	0	0	65	0	0	12	0	0	12	0	0	14	0	0	43	0	0
HAD	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25115	3612	0.13	22134	2837	0.11
HAD	**TR1**	none	40240	9934	0.2	40889	4272	0.09	31545	7404	0.19	26490	16331	0.38	26558	6851	0.21	2609	325	0.11	1976	139	0.07
HAD	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	15	6	0.29
HAD	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3273	5537	0.63	2620	5128	0.66
HAD	**TR2**	none	5047	3469	0.41	4826	2752	0.36	3962	8873	0.69	3253	13937	0.81	3415	6585	0.66	711	471	0.4	522	979	0.65
HAD	**TR3**	none	93	1	0.01	53	1	0.02	280	0	0	5	0	0	109	0	0	1	0	0	2	0	0
Total HAD			**46000**	**13410**	**0.23**	**46077**	**7040**	**0.13**	**36024**	**16282**	**0.31**	**29951**	**30270**	**0.50**	**30216**	**13445**	**0.31**	**31807**	**9946**	**0.24**	**27432**	**9089**	**0.25**
HKE	**BT1**	none	78	0	0	70	0	0	59	0	0	60	0	0	39	0	0	24	0	0	38	0	0
HKE	**BT2**	none	15	2	0.12	19	2	0.1	10	5	0.33	9	0	0	10	0	0	7	0	0	12	0	0
HKE	**GN1**	none	477	0	0	531	0	0	596	0	0	336	0	0	375	0	0	419	0	0	447	0	0
HKE	**GT1**	none	1	0	0	3	0	0	1	0	0	1	0	0	17	0	0	6	0	0	18	0	0
HKE	**LL1**	none	0	0	0	0	0	0	0	0	0	0	0	0	1182	0	0	2311	0	0	1224	0	0
HKE	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2060	90	0.04	1862	349	0.16
HKE	**TR1**	none	895	332	0.27	1161	468	0.29	1457	413	0.22	2068	404	0.16	3161	438	0.12	1755	200	0.1	1375	225	0.14
HKE	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0.83	3	18	0.86
HKE	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108	0	0	103	66	0.39
HKE	**TR2**	none	462	69	0.13	317	396	0.56	291	554	0.66	344	666	0.66	575	415	0.42	430	330	0.43	316	150	0.32
HKE	**TR3**	none	38	0	0	33	0	0	12	0	0	8	0	0	0	0	0	0	0	0	26	0	0
Total HKE			**1966**	**403**	**0.17**	**2134**	**866**	**0.29**	**2426**	**972**	**0.29**	**2826**	**1070**	**0.27**	**5359**	**853**	**0.14**	**7121**	**625**	**0.08**	**5424**	**808**	**0.13**

Table 6.3.2.1 cont

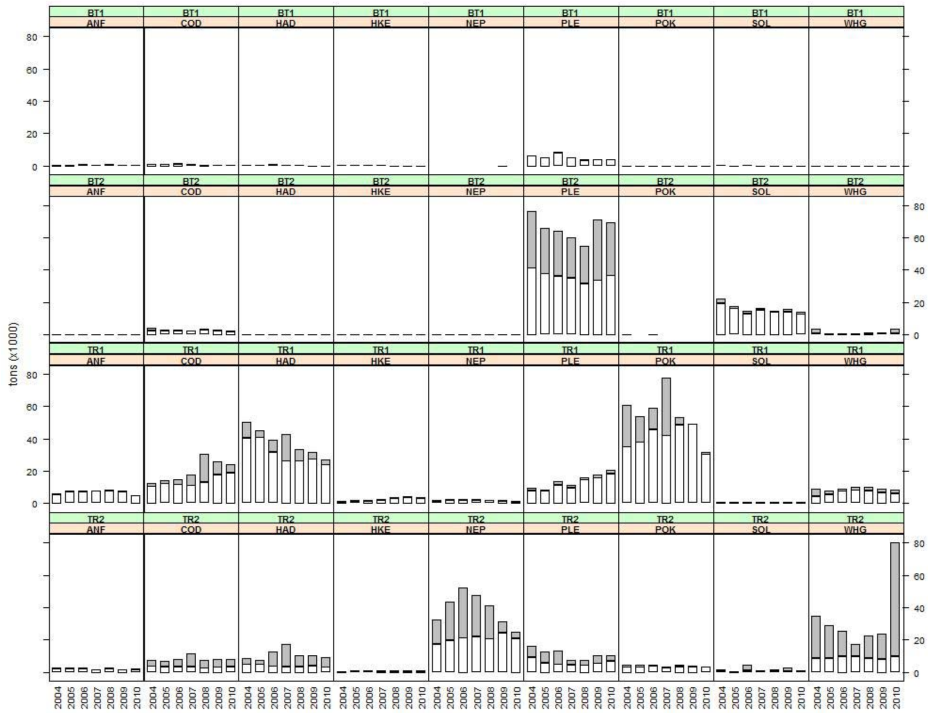
species	gear	specon	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
NEP	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
NEP	BT2	none	40	0	0	77	8	0.09	59	0	0	93	0	0	31	0	0	86	0	0	82	0	0
NEP	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEP	GT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
NEP	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEP	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	950	0	0	598	0	0
NEP	TR1	none	1292	406	0.24	2089	580	0.22	2026	443	0.18	1842	442	0.19	1608	369	0.19	535	196	0.27	395	177	0.31
NEP	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	399	319	0.44	523	494	0.49
NEP	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19653	0	0	17093	0	0
NEP	TR2	none	17190	15055	0.47	19334	23972	0.55	21336	31169	0.59	21912	25570	0.54	20597	20795	0.5	4096	6645	0.62	3365	3219	0.49
NEP	TR3	none	16	0	0	5	0	0	20	0	0	11	0	0	0	0	0	10	0	0	35	0	0
Total NEP			**18538**	**15461**	**0.45**	**21505**	**24560**	**0.53**	**23441**	**31612**	**0.57**	**23858**	**26012**	**0.52**	**22236**	**21164**	**0.49**	**25731**	**7160**	**0.22**	**22091**	**3890**	**0.15**
PLE	BT1	none	6180	0	0	5113	0	0	7713	115	0.01	5242	0	0	3012	63	0.02	3566	0	0	3661	0	0
PLE	BT2	none	41586	34803	0.46	37769	28309	0.43	35841	28072	0.44	34829	25142	0.42	31634	23053	0.42	33858	37410	0.52	36707	32770	0.47
PLE	GN1	none	2958	336	0.1	2736	528	0.16	2915	0	0	1523	548	0.26	1730	253	0.13	1882	8617	0.82	1789	0	0
PLE	GT1	none	1273	0	0	1461	0	0	1340	0	0	987	0	0	665	9	0.01	1168	0	0	1001	1953	0.66
PLE	LL1	none	11	0	0	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0
PLE	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5042	1101	0.18	5067	859	0.14
PLE	TR1	none	7837	1484	0.16	7905	632	0.07	11389	2115	0.16	9676	1340	0.12	14624	1294	0.08	10877	865	0.07	13328	1062	0.07
PLE	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	32	0.94	2	58	0.97
PLE	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1132	2618	0.7	1544	1236	0.44
PLE	TR2	none	8820	7118	0.45	5698	6799	0.54	4945	8391	0.63	4380	2852	0.39	4655	2926	0.39	4431	2291	0.34	5101	2128	0.29
PLE	TR3	none	22	0	0	19	0	0	26	0	0	6	0	0	1	0	0	2	0	0	11	0	0
Total PLE			**68687**	**43741**	**0.39**	**60702**	**36268**	**0.37**	**64171**	**38693**	**0.38**	**56643**	**29882**	**0.35**	**56321**	**27598**	**0.33**	**61961**	**52934**	**0.46**	**68211**	**40066**	**0.37**

Table 6.3.2.1 cont

species	gear	specon	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
POK	**BT1**	none	15	0	0	9	0	0	11	0	0	11	0	0	4	2	0.33	1	0	0	1	0	0
POK	**BT2**	none	9	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POK	**GN1**	none	106	0	0	87	0	0	71	0	0	49	0	0	45	0	0	72	0	0	128	0	0
POK	**GT1**	none	3	0	0	3	0	0	4	0	0	2	0	0	2	0	0	10	0	0	23	0	0
POK	**LL1**	none	19	0	0	5	0	0	18	0	0	3	0	0	4	0	0	8	0	0	5	0	0
POK	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21977	37	0	17979	1479	0.08
POK	**TR1**	none	34973	26119	0.43	38080	15862	0.29	45528	13393	0.23	42355	35456	0.46	48408	4583	0.09	26903	396	0.01	12279	169	0.01
POK	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
POK	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	363	0	0	217	127	0.37
POK	**TR2**	none	3403	1131	0.25	3463	1238	0.26	3625	767	0.17	2646	653	0.2	3517	677	0.16	2991	234	0.07	2767	262	0.09
POK	**TR3**	none	324	9	0.03	170	0	0	132	0	0	47	0	0	17	0	0	1	0	0	0	0	0
Total POK			**38852**	**27259**	**0.41**	**41817**	**17100**	**0.29**	**49390**	**14160**	**0.22**	**45113**	**36109**	**0.44**	**51997**	**5262**	**0.09**	**52326**	**667**	**0.01**	**33400**	**2037**	**0.06**
SOL	**BT1**	none	75	0	0	42	0	0	52	0	0	30	0	0	24	0	0	26	0	0	15	0	0
SOL	**BT2**	none	19294	2598	0.12	16225	1344	0.08	12920	1419	0.1	15365	862	0.05	13983	605	0.04	14036	1625	0.1	12539	1659	0.12
SOL	**GN1**	none	714	0	0	790	0	0	707	0	0	536	36	0.06	713	16	0.02	905	62	0.06	753	0	0
SOL	**GT1**	none	1948	0	0	2169	0	0	2010	0	0	2162	77	0.03	2054	7	0	2068	19	0.01	864	29	0.03
SOL	**LL1**	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOL	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	5	0	0
SOL	**TR1**	none	19	2	0.1	18	0	0	30	20	0.4	29	0	0	34	0	0	22	0	0	21	0	0
SOL	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SOL	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107	8	0.07	56	0	0
SOL	**TR2**	none	801	488	0.38	568	3	0.01	728	3619	0.83	775	217	0.22	801	45	0.05	740	2088	0.74	566	0	0
SOL	**TR3**	none	1	0	0	2	0	0	0	0	0	1	0	0	6	0	0	6	0	0	3	0	0
Total SOL			**22852**	**3088**	**0.12**	**19814**	**1347**	**0.06**	**16447**	**5058**	**0.24**	**18898**	**1192**	**0.06**	**17615**	**673**	**0.04**	**17921**	**3802**	**0.18**	**14822**	**1688**	**0.10**

Table 6.3.2.1 cont.

species	gear	specon	2004.L	2004.D	2004.R	2005.L	2005.D	2005.R	2006.L	2006.D	2006.R	2007.L	2007.D	2007.R	2008.L	2008.D	2008.R	2009.L	2009.D	2009.R	2010.L	2010.D	2010.R
WHG	**BT1**	none	6	0	0	3	0	0	7	1	0.12	3	0	0	1	0	0	1	0	0	1	0	0
WHG	**BT2**	none	244	3170	0.93	223	317	0.59	215	195	0.48	134	535	0.8	151	727	0.83	510	341	0.4	485	2781	0.85
WHG	**GN1**	none	7	0	0	8	0	0	9	0	0	15	0	0	2	0	0	4	0	0	8	0	0
WHG	**GT1**	none	25	0	0	33	0	0	21	2	0.09	12	7	0.37	9	19	0.68	11	0	0	16	45	0.74
WHG	**LL1**	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WHG	**TR1**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6543	1912	0.23	5705	2038	0.26
WHG	**TR1**	none	4424	4284	0.49	5386	2168	0.29	7511	1604	0.18	8268	1928	0.19	7762	2130	0.22	188	140	0.43	221	197	0.47
WHG	**TR2**	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	8	245	0.97
WHG	**TR2**	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2004	1169	0.37	1931	3624	0.65
WHG	**TR2**	none	8350	26343	0.76	8259	20450	0.71	9872	15529	0.61	9379	7713	0.45	8246	14087	0.63	6091	14313	0.7	7553	66624	0.9
WHG	**TR3**	none	522	3	0.01	637	0	0	1632	0	0	310	0	0	129	0	0	196	0	0	1187	0	0
Total WHG			**13579**	**33800**	**0.71**	**14549**	**22935**	**0.61**	**19267**	**17331**	**0.47**	**18121**	**10183**	**0.36**	**16300**	**16963**	**0.51**	**15548**	**17881**	**0.53**	**17115**	**75554**	**0.82**



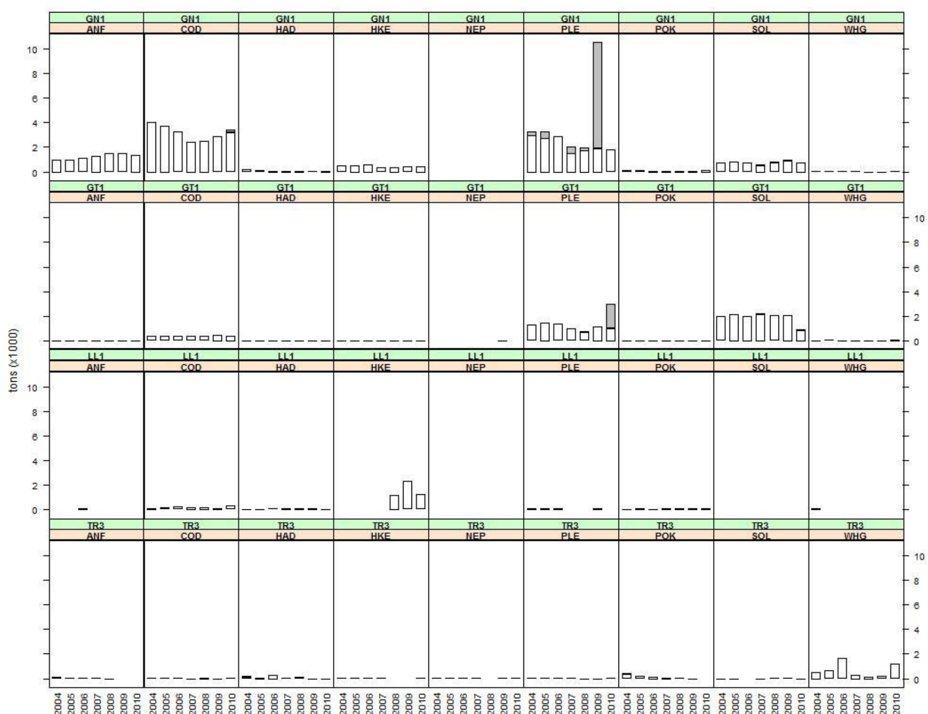


Figure 6.3.2.1; Estimated landings (white bars) and discards (grey bars) of targets species by regulated gears in management area 3b (North Sea, Skagerrak, Eastern Channel, 2EU). The upper chart shows the most used gears, the lower chart the remaining gears.

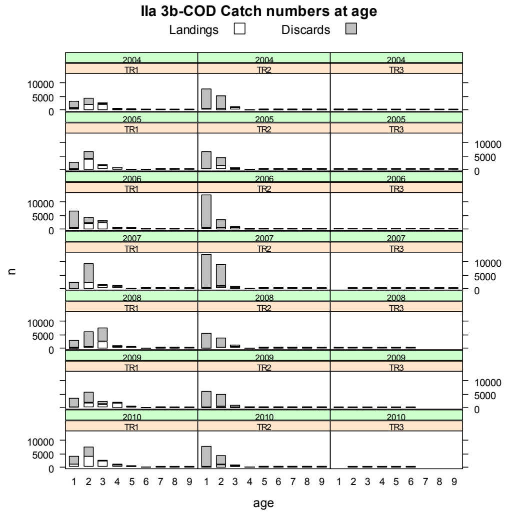


Figure 6.3.2.2. Area 3b (Skagerrak, North Sea & Eastern Channel), COD landings and discards at age in number by TR gears.

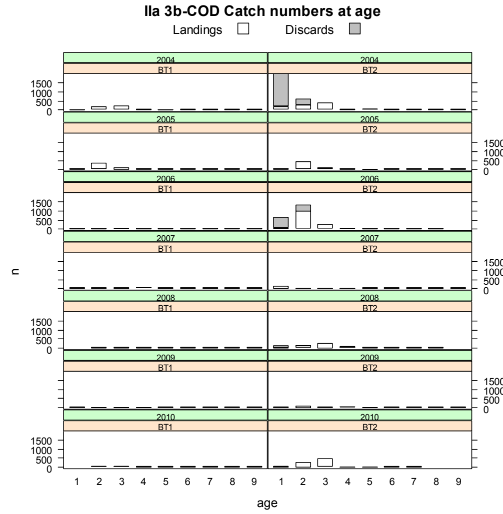


Figure 6.3.2.3. Area 3b (Skagerrak, North Sea & Eastern Channel), COD landings and discards at age in number by BT gears.

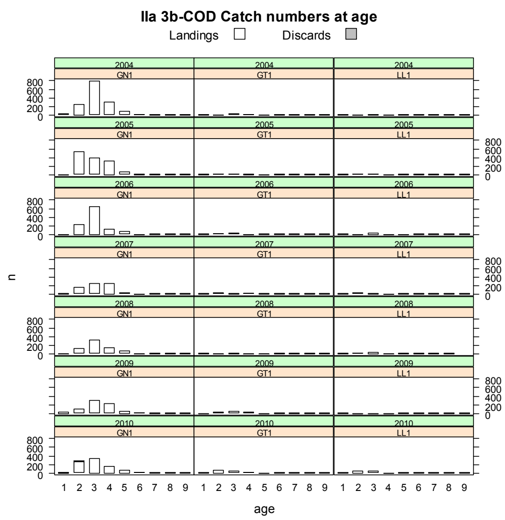


Figure 6.3.2.4. Area 3b (Skagerrak, North Sea & Eastern Channel), COD landings and discards at age in number by static gears.

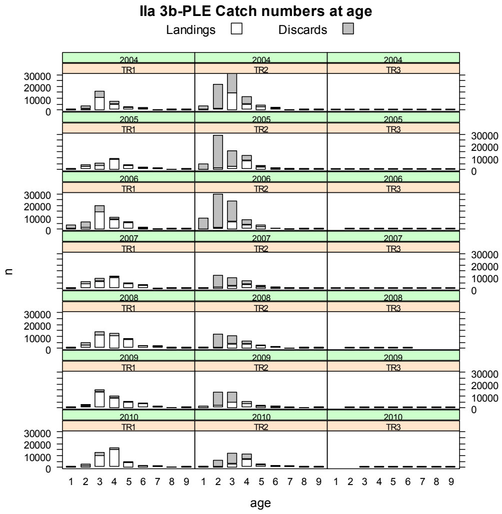


Figure 6.3.2.5. Area 3b (Skagerrak, North Sea & Eastern Channel), PLE landings and discards at age in number by TR gears.

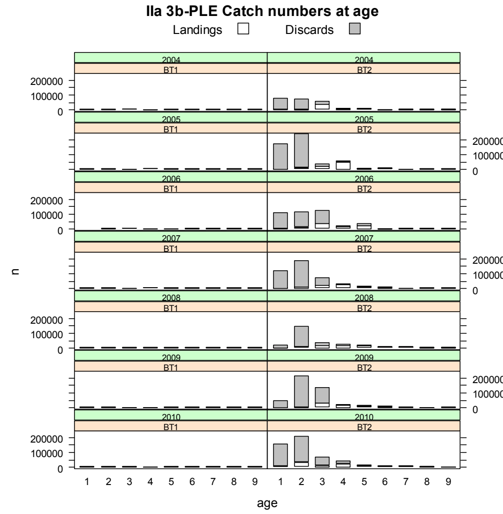


Figure 6.3.2.6. Area 3b (Skagerrak, North Sea & Eastern Channel), PLE landings and discards at age in number by BT gears .

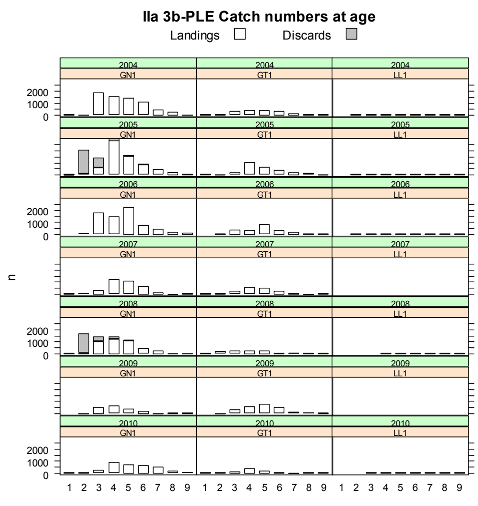


Figure 6.3.2.7. Area 3b (Skagerrak, North Sea & Eastern Channel), PLE landings and discards at age in number by static gears.

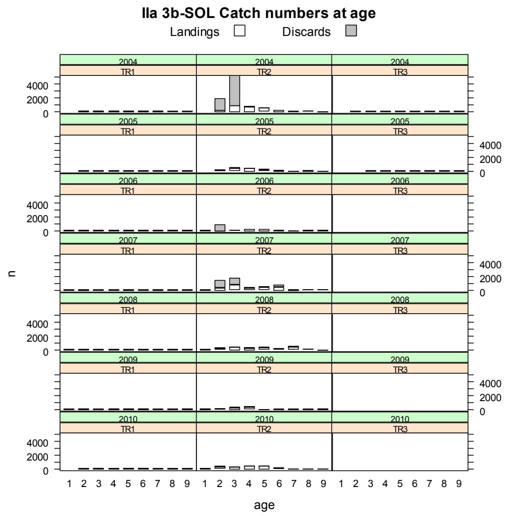


Figure 6.3.2.8. Area 3b (Skagerrak, North Sea & Eastern Channel), SOL landings and discards at age in number by TR gears.

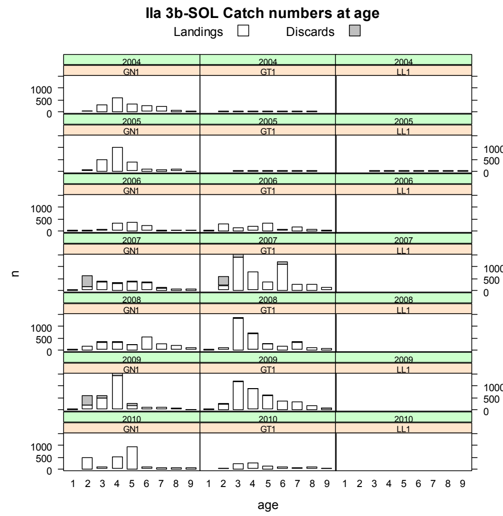


Figure 6.3.2.9. Area 3b (Skagerrak, North Sea & Eastern Channel), SOL landings and discards at age in number by static gears.

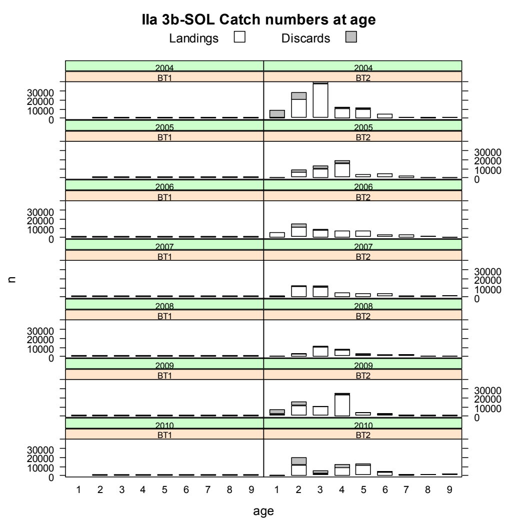


Figure 6.3.2.10. Area 3b (Skagerrak, North Sea & Eastern Channel), SOL landings and discards at age in number by BT gears.

6.3.3. Trend in CPUE of cod, sole and plaice by derogation in management area 3b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Catch rates of cod, plaice and sole in g/KW-day for cod categories are given in Tables 6.3.3.1-6.3.3.3. In some cases the figures refer only to landings, depending on whether discard data were available. In the context of possible effort management measures, it is useful to summarise the impact of each gear category in terms of the relative quantity removed per unit of effort. Using this approach, the CPUE for a given gear, when compared with the CPUE of another gear for the same period, can be used as a proxy for the relative fishing power of the gear. Therefore, the gear categories as ranked with regards to highest 2010 CPUE for cod, plaice and sole are indicated in the Tables. In addition, CPUE and LPUE by year are plotted (Figures 6.3.3.1) by species for the first four gear categories (when ranked by 2003-2010 average).

For cod (Table 6.3.3.1), CPUE for most gears has increased in 2010, potentially reflecting the recent slight increase in cod biomass (ICES, 2011). GN1 has usually been the gear with largest catch rate, with a stable CPUE around 1kg/kWday. However, the catch rate for TR1 gear has increased over the time period, and has been higher than GN1 since 2008. A striking obervation is that CPUE in TR1 CPart13 is actually higher than CPUE in TR1 none, which may appear counterintuitive. However, it must be kept in mind that CPart13 covers the main cod fisheries (primarily Scotland), which operate mostly in the North where most cod are, whereas TR1 none is mainly operated by the nations in the more southern part of the North Sea where cod abundance is more depleted, hence CPUE is lower. In this regards, CPart13 should not necessarily be compared to none for the same year. Noticeably, CPart13 CPUE in 2010 is at the level of the CPUE of the whole TR1 in 2008 in spite of recent stock increase.

The ranking indicates that longliners are also rather efficient at capturing cod, though again, the caveat about definition of effort for static gears also applies in this case, and the gear is not used much in the area.

A quite high cod CPUE was also observed for the exempted TR2 fleet CPart11, which may also appear counterintuitive. These are imputed to the segment of Scottish fleet that had been exempted to operate in the West of Scotland but did actually operate to a minor extent in the North Sea (1% of Scottish TR2 effort, cf Table 6.3.1.1), rather than to the exempted Swedish fleet which maintained a very low cod CPUE.

With regards to flatfish, it should be noted that plaice and sole in the Skagerrak (which is categorised as part of management area 3b) are considered as part of the same stocks as plaice and sole in the Kattegat (management area 3a). Both stocks are considered as being distinct from the North Sea stocks, as are plaice and sole in the Eastern Channel (another part of 3b). As a result, the CPUE data for plaice and sole in area 3b cover three different stocks of each species, and so need to be interpreted with care. The most efficient gear for the capture of plaice (Table 6.3.3.2) is indicated to be large and small mesh beam trawlers BT1 and BT2. For sole (Table 6.3.3.3), the most efficient gears for the capture of sole had consistently been trammel nets (GT1), but in 2010 the CPUE for that gear decreased to the CPUE level of small-mesh beam trawls BT2.

Table 6.3.3.1 Skagerrak, North Sea (incl. 2EU) and Eastern Channel. Cod CPUE (g/(kW*days)) by regulated gear category and year, 2004-2010, sorted in descending order with regards to CPUE 2010.

SPECIES	AREA	GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	2008-2010
COD	3b	TR1	CPART13	0	0	0	0	0	1042	1180	1106
COD	3b	GN1	none	929	929	807	795	819	905	1059	929
COD	3b	TR1	none	471	534	549	749	1170	930	961	1074
COD	3b	LL1	none	306	362	593	459	333	137	491	291
COD	3b	TR2	none	185	189	220	327	232	334	387	296
COD	3b	BT1	none	213	221	234	187	256	132	184	195
COD	3b	TR2	CPART13	0	0	0	0	0	174	179	176
COD	3b	GT1	none	92	78	60	63	97	119	150	119
COD	3b	TR2	CPART11	0	0	0	0	0	5	103	55
COD	3b	BT2	none	60	47	49	43	88	68	54	70
COD	3b	TR3	none	8	11	15	4	57	3	14	26

Table 6.3.3.2 Skagerrak, North Sea (incl. 2EU) and Eastern Channel. Plaice CPUE (g/(kW*days)) by regulated gear category and year, 2004-2010, sorted in descending order with regards to CPUE 2010.

SPECIES	AREA	GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	2008-2010
PLE	3b	BT1	none	1111	1008	1374	1420	1434	2041	2094	1826
PLE	3b	BT2	none	1185	1050	1155	1118	1355	1753	1777	1627
PLE	3b	TR1	none	352	322	501	462	612	1118	1655	930
PLE	3b	GT1	none	344	332	234	179	174	298	1080	456
PLE	3b	GN1	none	758	808	728	679	645	3307	560	1511
PLE	3b	TR2	none	402	352	374	209	234	356	484	325
PLE	3b	TR1	CPART13	0	0	0	0	0	399	453	424
PLE	3b	TR2	CPART13	0	0	0	0	0	352	268	311
PLE	3b	TR2	CPART11	0	0	0	0	0	43	74	59
PLE	3b	TR3	none	6	7	13	6	0	1	9	4
PLE	3b	LL1	none	27	3	5	0	0	1	0	0

Table 6.3.3.3 Skagerrak, North Sea (incl. 2EU) and Eastern Channel. Sole CPUE (g/(kW*days)) by regulated gear category and year, 2004-2010, sorted in descending order with regards to CPUE 2010.

SPECIES	AREA	GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	2008-2010
SOL	3b	BT2	none	339	279	259	302	362	385	363	370
SOL	3b	GT1	none	527	493	351	407	533	532	326	479
SOL	3b	GN1	none	164	195	177	188	237	305	236	259
SOL	3b	TR2	none	33	16	122	29	26	150	38	64
SOL	3b	BT1	none	13	8	9	8	11	15	9	12
SOL	3b	TR2	CPART13	0	0	0	0	0	11	5	8
SOL	3b	TR1	none	1	1	2	1	1	2	2	2
SOL	3b	TR3	none	0	1	0	1	5	7	2	4
SOL	3b	LL1	none	0	0	0		0	0	0	0
SOL	3b	TR1	CPART13	0	0	0	0	0	1	0	1
SOL	3b	TR2	CPART11	0	0	0	0	0	1	0	1

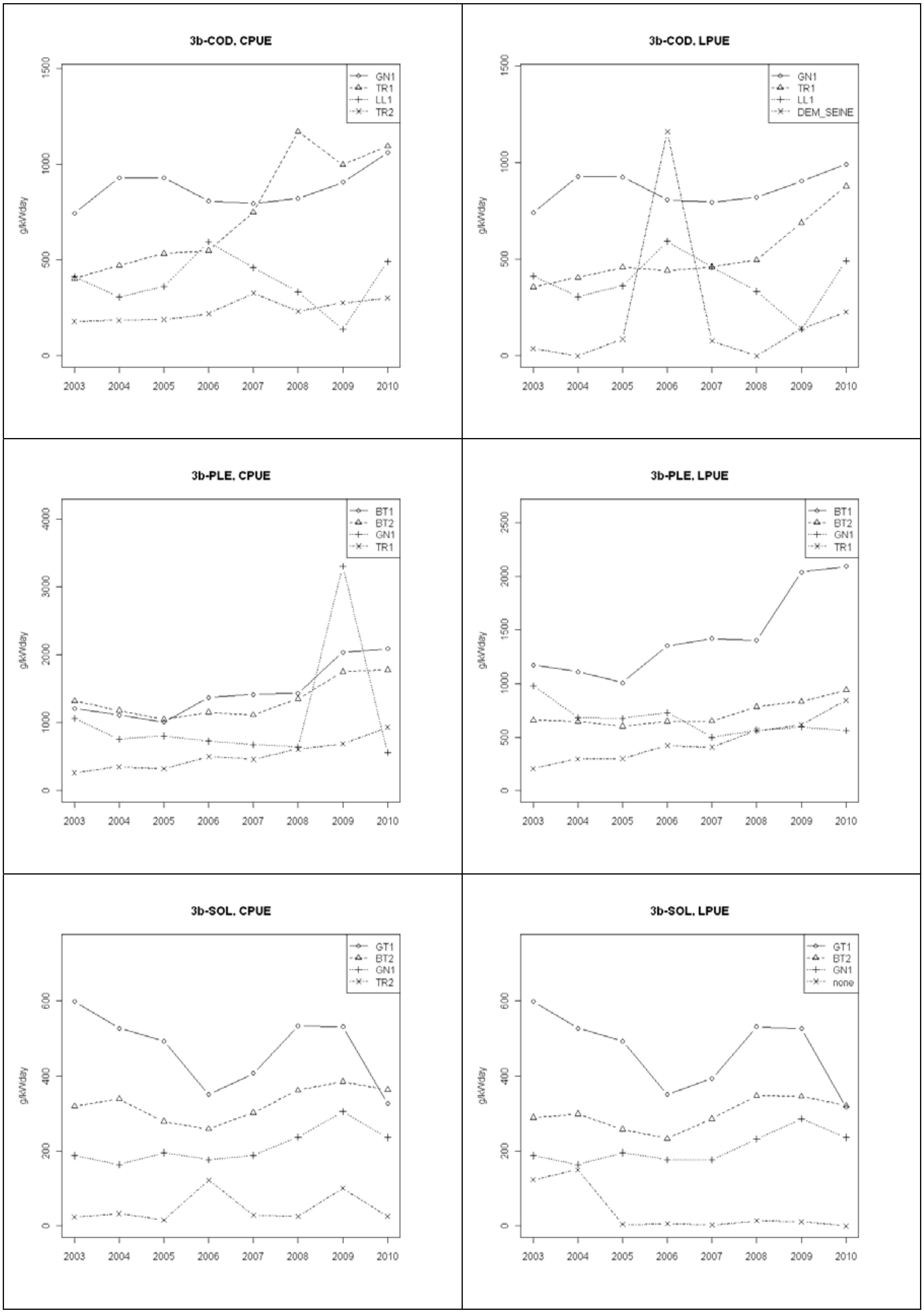


Figure 6.3.3.1 Area 3b. CPUE and LPUE (g/(kW*days)) for the four main regulated categories.

6.3.4. Ranked derogations

Rankings of gears in terms of catches and landings are shown in Tables 6.3.4.1 and 6.3.4.2.

With regards to cod, TR1 and TR2 cumulates to more than 80% of the catches in 2010, but only 67% of the landings as GN1 contributes largely also. The most important gears for plaice are BT2 and TR1, while for sole BT2 alone contributes to 85% of the catches.

Table 6.3.4.1. Skagerrak, North Sea including 2 EU and Eastern Channel: Ranked categories according to relative cod, plaice and sole **catches** in weight in area 3b, 2003-2010. Ranking is according to the year 2010.

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Cumul 2010
IIa	3b	COD	TR1	0.47	0.42	0.48	0.49	0.51	0.67	0.64	0.63	100%
IIa	3b	COD	TR2	0.25	0.25	0.23	0.26	0.32	0.17	0.20	0.20	37%
IIa	3b	COD	GN1	0.12	0.14	0.13	0.11	0.07	0.06	0.07	0.09	17%
IIa	3b	COD	BT2	0.12	0.13	0.10	0.09	0.07	0.08	0.07	0.06	8%
IIa	3b	COD	GT1	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	3%
IIa	3b	COD	BT1	0.02	0.04	0.04	0.04	0.02	0.01	0.01	0.01	2%
IIa	3b	COD	LL1	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01	1%
IIa	3b	COD	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Cumul 2010
IIa	3b	PLE	BT2	0.68	0.68	0.68	0.62	0.69	0.65	0.62	0.64	100%
IIa	3b	PLE	TR1	0.07	0.08	0.09	0.13	0.13	0.19	0.16	0.19	36%
IIa	3b	PLE	TR2	0.15	0.14	0.13	0.13	0.08	0.09	0.09	0.09	17%
IIa	3b	PLE	BT1	0.06	0.05	0.05	0.08	0.06	0.04	0.03	0.03	8%
IIa	3b	PLE	GT1	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.03	4%
IIa	3b	PLE	GN1	0.04	0.03	0.03	0.03	0.02	0.02	0.09	0.02	2%
IIa	3b	PLE	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	PLE	LL1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Cumul 2010
IIa	3b	SOL	BT2	0.84	0.84	0.83	0.67	0.81	0.80	0.72	0.86	100%
IIa	3b	SOL	GT1	0.08	0.08	0.10	0.09	0.11	0.11	0.10	0.05	14%
IIa	3b	SOL	GN1	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.05	9%
IIa	3b	SOL	TR2	0.04	0.05	0.03	0.20	0.05	0.05	0.14	0.04	4%
IIa	3b	SOL	TR1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	SOL	BT1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	SOL	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	SOL	LL1	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0%

Table 6.3.4.2 Skagerrak, North Sea including 2 EU and Eastern Channel: Ranked categories according to relative cod, plaice and sole **landings** in weight in area 3b, 2003-2009. Ranking is according to the year 2010.

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Cumul 2010
IIa	3b	COD	TR1	0.48	0.47	0.52	0.54	0.55	0.59	0.66	0.675	100%
IIa	3b	COD	GN1	0.14	0.18	0.16	0.15	0.12	0.11	0.11	0.112	33%
IIa	3b	COD	TR2	0.18	0.17	0.15	0.14	0.16	0.13	0.12	0.111	21%
IIa	3b	COD	BT2	0.14	0.11	0.09	0.10	0.11	0.12	0.09	0.065	10%
IIa	3b	COD	GT1	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.014	4%
IIa	3b	COD	BT1	0.03	0.05	0.05	0.05	0.03	0.02	0.01	0.011	2%
IIa	3b	COD	LL1	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.010	1%
IIa	3b	COD	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.001	0%

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Cumul 2010
IIa	3b	PLE	BT2	0.60	0.61	0.62	0.56	0.61	0.56	0.55	0.54	100%
IIa	3b	PLE	TR1	0.09	0.11	0.13	0.18	0.17	0.26	0.26	0.27	46%
IIa	3b	PLE	TR2	0.13	0.13	0.09	0.08	0.08	0.08	0.09	0.10	19%
IIa	3b	PLE	BT1	0.10	0.09	0.08	0.12	0.09	0.05	0.06	0.05	9%
IIa	3b	PLE	GN1	0.06	0.04	0.05	0.05	0.03	0.03	0.03	0.03	4%
IIa	3b	PLE	GT1	0.01	0.02	0.02	0.02	0.02	0.01	0.02	0.01	1%
IIa	3b	PLE	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	PLE	LL1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Cumul 2010
IIa	3b	SOL	BT2	0.83	0.84	0.82	0.79	0.81	0.79	0.78	0.85	100%
IIa	3b	SOL	GT1	0.09	0.09	0.11	0.12	0.11	0.12	0.12	0.06	15%
IIa	3b	SOL	GN1	0.04	0.03	0.04	0.04	0.03	0.04	0.05	0.05	10%
IIa	3b	SOL	TR2	0.04	0.04	0.03	0.04	0.04	0.05	0.05	0.04	5%
IIa	3b	SOL	TR1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	SOL	BT1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	SOL	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
IIa	3b	SOL	LL1	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0%

6.3.5. Unregulated gears in management area 3b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Effort trends by unregulated gears are given in Table 6.3.5.1 and shown in Figure 6.3.5.1. Category 'none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes, and this category has decreased significantly in 2010.

This section provides a breakdown of the main gears within this category in effort (kW*Days at sea), cod catches, plaice catches and sole catches. Most of the unregulated effort is performed using beam trawls, pelagic trawls and otter trawls in equal proportions, and also with dredges. The unregulated effort has remained largely constant since 2008.

The unregulated gears account for a very minor part of the total landings of cod (around 1.4%), plaice and sole (around 0.5%) (Table 6.3.5.2).

Table 6.3.5.1. Effort (Kwdays) of unregulated gear in area 3b 2004-2010. The full time series is available on the STECF website.

REG GEAR C	2004	2005	2006	2007	2008	2009	2010	Rel 04-06	Rel 2009
BEAM	13521284	13230382	12938958	13782031	13336844	14047370	12674010	0.96	0.90
DEM_SEINE	9718	23138	2585	13017	5214	14305	43871	3.71	3.07
DREDGE	4459314	5986424	3218067	3803033	3139961	3776311	4545514	1.00	1.20
none	385857	251012	308412	720239	773769	926110	200002	0.63	0.22
OTTER	14271608	9751513	9155423	6077251	8409456	9496032	9754160	0.88	1.03
PEL_SEINE	2721915	2720802	1998040	1417010	1153077	1432037	1134323	0.46	0.79
PEL_TRAWL	25336800	21606936	18926549	17389951	11399213	12252507	11422001	0.52	0.93
POTS	3127845	3242037	3523180	3610120	3500987	3589291	3990800	1.21	1.11
Grand Total	**63834341**	**56812244**	**50071214**	**46812652**	**41718521**	**45533963**	**43764681**	0.77	0.96

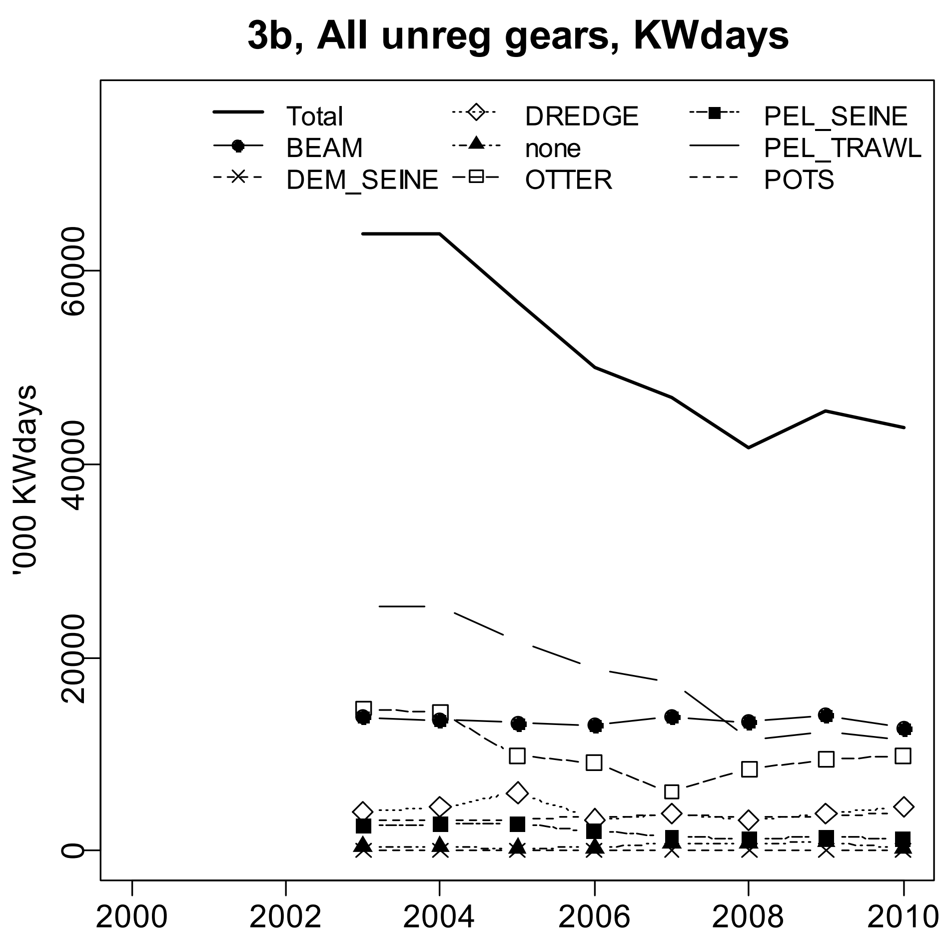


Figure. 6.3.5.1 Effort by unregulated gear in North Sea 2003-2010.

Table 6.3.5.2 Skagerrak, North Sea including 2 EU and Eastern Channel: Landings and discards (t) of cod plaice and sole made by unregulated gears.

SPECIES	REG_GEAR	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D	2008 L	2008 D	2009 L	2009 D	2010 L	2010 D
COD	BEAM	24	0	20	0	14	0	24	0	32	0	113	0	51	0
COD	DEM_SEINE	0	0	2	1	3	0	1	0			2	0	10	0
COD	DREDGE	1	0	0	0	1	0	4	0	1	0	0	0	3	0
COD	none	30	0	12	0	23	0	10	0	44	0	63	0	27	0
COD	OTTER	277	51	300	2706	220	33	127	197	155	3819	204	3	262	20
COD	PEL_SEINE	0	0	8	4	1	0			0	0	0	0	2	1
COD	PEL_TRAWL	7	0	11	0	11	0	6	0	7	0	41	0	29	0
COD	POTS	16	0	17	0	15	0	11	0	7	0	7	0	12	0
COD	TOTAL	355	51	370	2711	288	33	183	197	246	3819	430	3	396	21
PLE	BEAM	75	0	74	0	45	0	41	0	12	0	26	0	118	0
PLE	DEM_SEINE			0	0	6	0					3	0	12	0
PLE	DREDGE	3	0	33	0	7	0	3	0	7	0	8	0	23	0
PLE	none	60	0	23	0	23	0	63	0	17	0	22	0	8	0
PLE	OTTER	82	0	120	45	41	0	27	483	15	0	13	5	252	0
PLE	PEL_SEINE	0	0	0	0	0	0			0	0	0	0	0	0
PLE	PEL_TRAWL	18	0	14	0	14	0	2	0	13	0	14	0	9	0
PLE	POTS	1	0	1	0	1	0	1	0	0	0	0	0	8	0
PLE	TOTAL	239	0	265	45	137	0	137	483	64	0	86	5	430	0
SOL	BEAM	38	58	40	0	18	0	27	0	17	0	24	0	30	0
SOL	DEM_SEINE														
SOL	DREDGE	2	0	43	0	5	0	4	0	4	0	7	0	24	0
SOL	none	58	0	1	0	2	0	2	0	11	0	11	0	0	0
SOL	OTTER	77	0	115	0	48	0	20	0	20	0	20	0	14	0
SOL	PEL_TRAWL	16	0	15	0	14	0	5	0	17	0	17	0	12	0
SOL	POTS	0	0	0	0	0	0	2	0	0	0	0	0	5	0
SOL	TOTAL	191	58	214	0	87	0	60	0	69	0	79	0	85	0

6.3.6. Vessels <10m in management area 3b: Skagerrak, North Sea and Eastern Channel

Effort (Table 6.3.6.1) and landings (Table 6.3.6.2) is provided for the vessels under 10m in area 3b, for all countries except Belgium, for some of the main species caught. Around half of the effort is operated with Pots, and secondly GN1 (13%) and TR2 (10%). The main fishery is for edible crab, and secondly for cod, Nephrops and plaice. The detail by gear for cod, plaice and sole is given Table 6.3.6.3.

For the whole area 3b in 2010, this represents around 6, 5, 5 and 2% of the total landings of sole, cod, Nephrops and plaice respectively.

It is to be noted a step up in 2009 in the landings of sole and plaice from under 10m beam trawlers, which is not observed anymore in 2010, and this may potentially indicate some misspecification of small vessels landings for that particular year.

Table 6.3.6.1 Skagerrak, North Sea and Eastern Channel. Fishing effort (kwDays) by vessels <10m.

REG GEAR COD	2004	2005	2006	2007	2008	2009	2010
BEAM	37078	36682	46668	73298	111725	81100	38393
BT1	204	4	4				4
BT2	48908	45250	35829	62071	65656	58840	51668
DEM_SEINE	858	301	503	457	679	6052	4971
DREDGE	98741	265709	259194	271683	365924	356467	328637
GN1	454530	449130	967760	1795130	1695956	1804621	1679578
GT1	569547	612516	873714	514275	473795	563927	634550
LL1	215306	262614	213202	378603	329965	242143	504597
none	113068	126546	98136	106787	84641	186447	838170
OTTER	173968	236578	71367	91865	77770	119320	145596
PEL_SEINE	2692	5461	5540	4176	15475	19220	27581
PEL_TRAWL	3017	11819	5010	11413	19155	31387	28456
POTS	2693090	2620079	5289854	5404850	5176992	5654504	6473804
TR1	56332	71177	99442	184075	322486	256321	258155
TR2	1309060	1084900	1312286	1586111	1255512	1175079	1271477
TR3	102293	128588	170654	128513	53370	55091	58102
Grand Total	5878692	5957354	9449163	10613307	10049101	10610519	12343739

Table 6.3.6.2 Skagerrak, North Sea and Eastern Channel. Landings (t) by vessels <10m.

SPECIES	2004 L	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L
ANF	20	17	21	23	24	22	25
BLI							
BSF		0	0			0	
CMO	0	0	0	0			
COD	1869	1863	1843	1400	1558	1574	1530
COE	25	16	47	61	24	26	20
CRE	3092	2182	4211	4212	3917	3473	3822
ELZ							0
GUP				0	0		
HAD	96	32	59	248	152	78	149
HKE	34	29	37	8	24	48	67
JAX	9	4	1	5	5	1	1
MAC	500	441	523	453	527	551	821
NEP	1138	1649	2304	2007	1460	1920	1288
PEN						0	
PLE	1342	1306	1613	1230	1322	1540	1283
POK	52	35	64	26	29	29	30
RAJ	0	0	0	0	0	0	0
RJG							0
RNG		0			0		
SBR			0	0		0	
SCE	587	559	584	549	569	558	580
SCR	58	69	92	78	43	36	109
SHO							0
SOL	987	789	933	1108	1037	1508	1032
WHB			0				0
WHG	187	312	733	687	295	477	424
Grand Total	9996	9303	13065	12095	10986	11841	11181

Table 6.3.6.3. Skagerrak, North Sea and Eastern Channel. Landings (t) of cod, plaice and sole by vessels under 10m, 2004-2010

SPECIES	REG_GEAR	2004 L	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L
COD	BEAM	0	0					1
	BT2	0	0	0	0	0	36	1
	DREDGE	0	0	0	1	0	2	0
	GN1	376	640	883	580	660	569	461
	GT1	53	66	67	62	67	128	94
	LL1	181	108	124	172	262	229	297
	none	1199	951	600	411	398	370	443
	OTTER	21	28	4	1	0	0	1
	PEL_SEINE						0	
	PEL_TRAWL		1	1	0	0	0	
	POTS	16	11	11	8	18	52	46
	TR1	9	34	46	53	77	85	73
	TR2	14	24	107	112	76	103	113
	TR3	0		0	0	0		
COD Total		1869	1863	1843	1400	1558	1574	1530
PLE	BEAM	0	6	0	0	0	0	0
	BT2	59	60	38	41	36	373	23
	DREDGE	4	0	1	3	3	2	0
	GN1	243	299	396	327	368	364	301
	GT1	117	123	136	115	65	66	126
	LL1	1	3	2	1	1	1	2
	none	638	602	582	396	499	394	464
	OTTER	125	81	12	1	0	0	12
	PEL_TRAWL		1	0	1	1	1	0
	POTS	0	0	1	2	4	9	6
	TR1	79	80	169	160	249	191	233
	TR2	76	51	276	183	96	139	115
	TR3	0	0	0	0	0		1
PLE Total		1342	1306	1613	1230	1322	1540	1283
SOL	BEAM	3	7	0	0	0	0	0
	BT2	53	40	22	44	42	326	20
	DREDGE	0	0	1	2	3	1	0
	GN1	328	247	398	572	445	597	492
	GT1	291	268	195	119	144	156	149
	LL1	2	2	1	0	3	3	7
	none	73	56	34	38	50	51	27
	OTTER	112	82	34	1	0	1	8
	PEL_SEINE						0	
	PEL_TRAWL		0	0	0	0	0	0
	POTS	0	1	0	2	14	6	14
	TR1	3	3	8	24	99	90	60
	TR2	122	83	239	305	237	277	255
	TR3	0	0	1	1			0
SOL Total		987	789	933	1108	1037	1508	1032

6.3.7. Spatial distribution patterns of effective effort

Figures 6.3.7.1-6.3.7.8 show spatial distribution of effort for the eight cod plan gear categories.

It is to be noted that the display of the maps has changed compared to previous reports, and a display with color categories of equal effort spread was preferred to the previous display of categories with equal number of observations.

Otter trawls with 100+mm mesh (TR1, Figure 6.3.7.1) are the main roundfish gear and are mainly used in most of the North Sea. There has been a decrease of the effort in the Southern North Sea over years. Otter trawls with 70-99 mm mesh size (TR2, Figure 6.3.7.2) are the main Nephrops gears. They are now mostly used on the places of the largest Nephrops Functional Units along the Scottish and English coast as well as in the Skagerrak and in areas where whiting are fished, for example the English Channel. The effort in the Central North Sea and along the Norwegian waters has decreased. This category was previously dealt in two groups, below 90 mm mostly spread on the Western and South-western North Sea, and above 90mm mainly used in Skagerrak. But the grouping of these two distinct groups in a single category does not allow one to observe clear spatial trends. Static gears have traditionally been localised closer to the shores, often in patchy fishing grounds. There are some indications that fishing grounds for these gears have contracted in recent years.

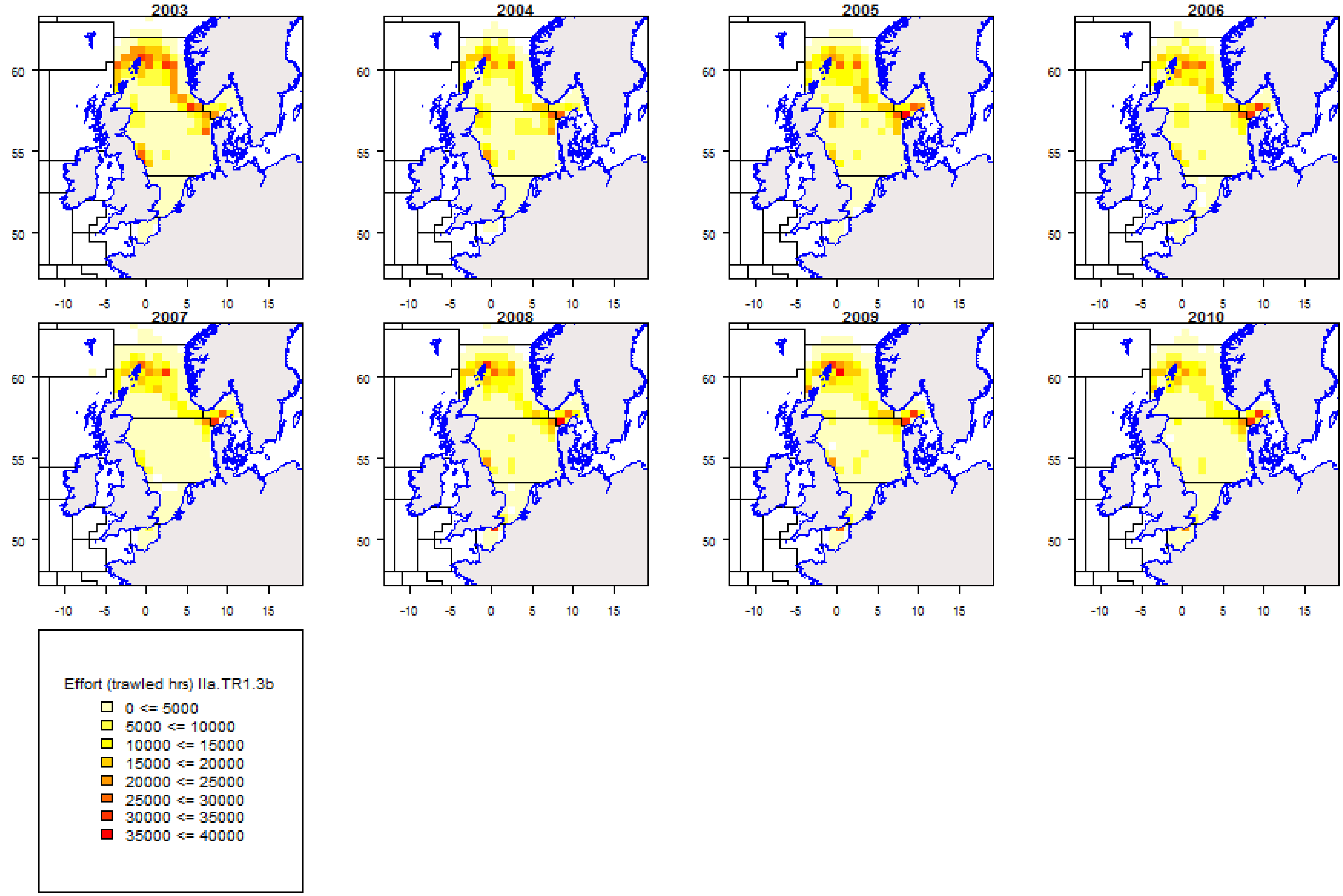


Figure 6.3.7.1 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of TR1 gears 2003-2010.

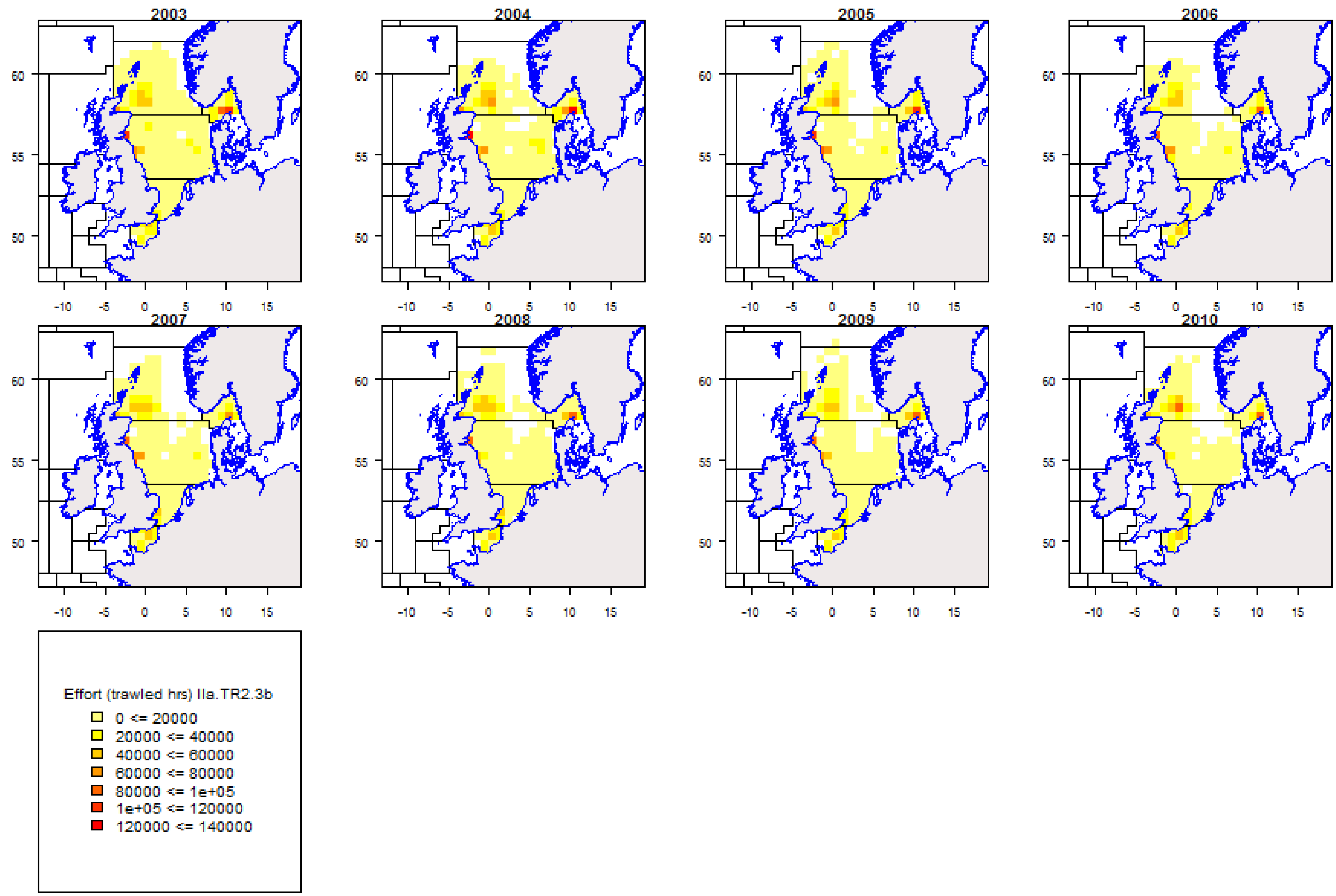


Figure 6.3.7.2 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of TR2 gears 2003-2010.

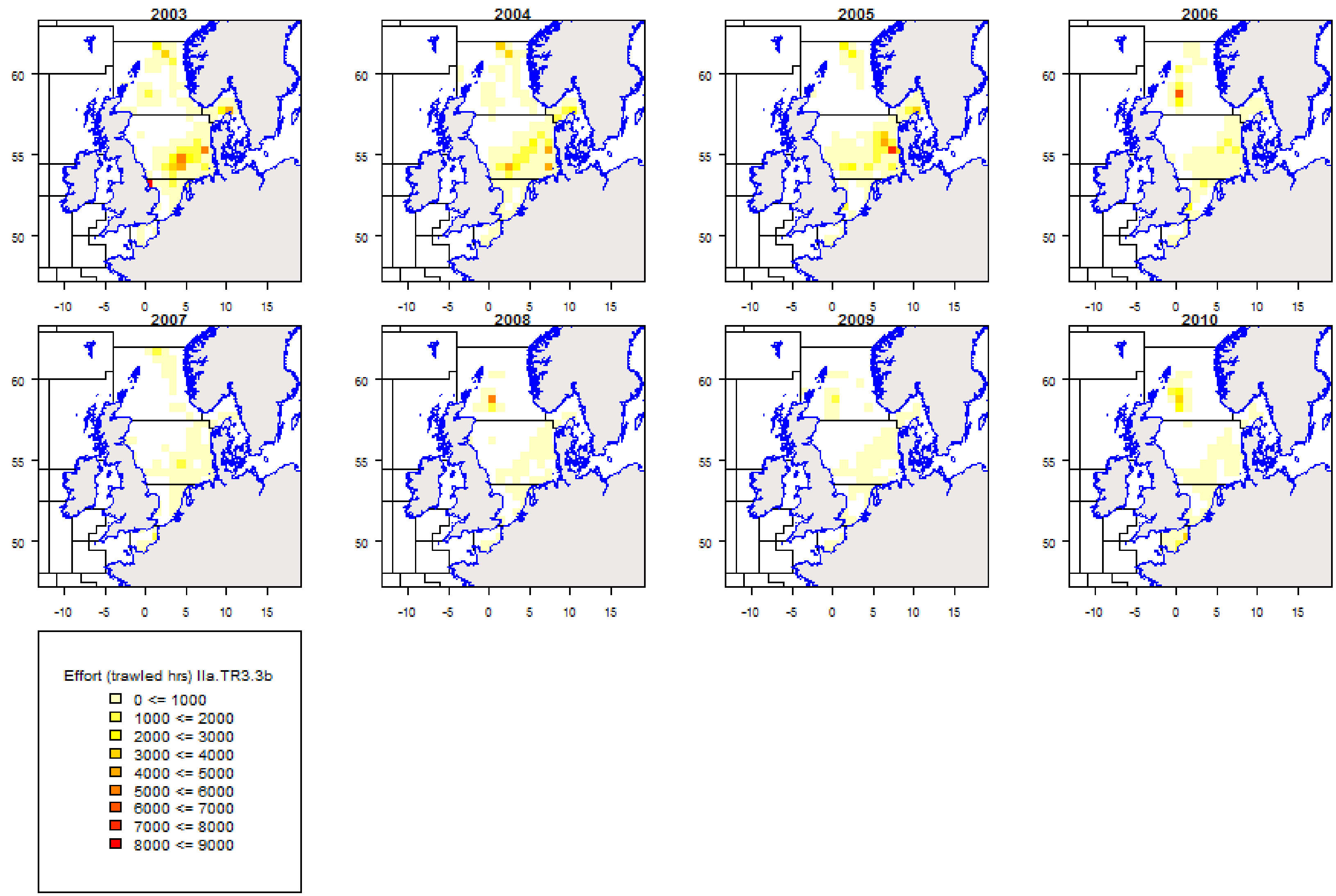


Figure 6.3.7.3 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of TR3 gears 2003-2010.

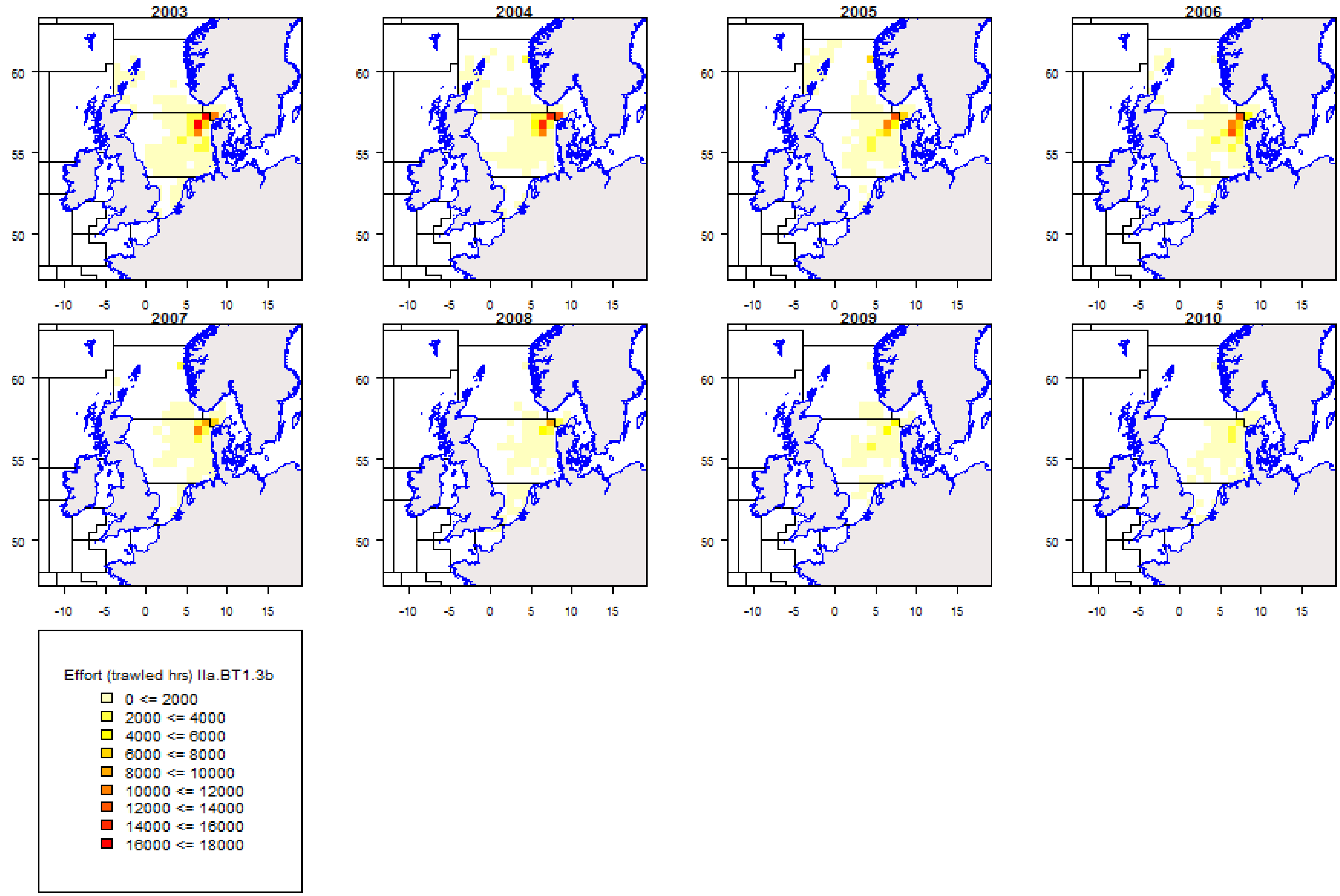


Figure 6.3.7.4 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of BT1 gears 2003-2010.

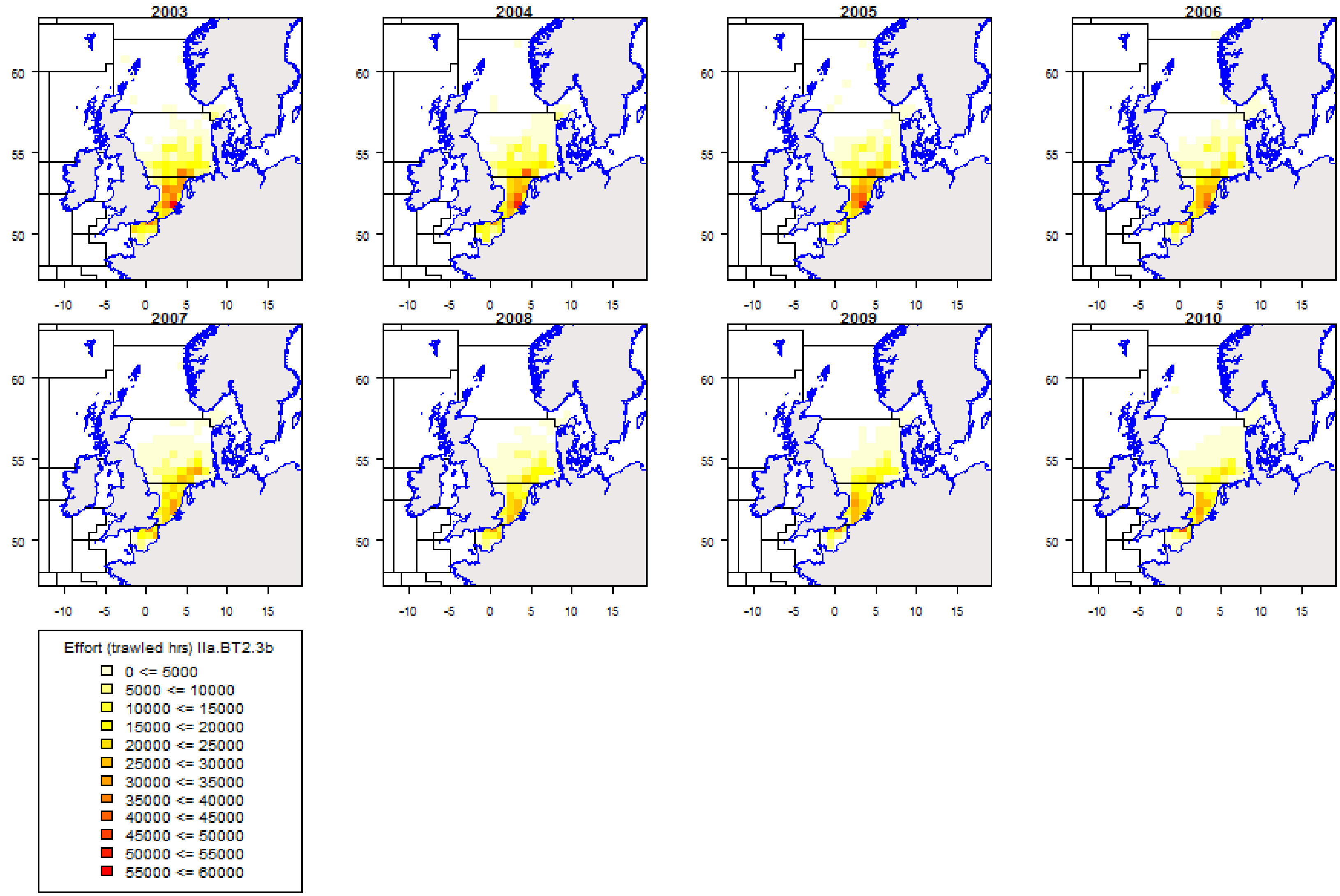


Figure 6.3.7.5 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of BT2 gears 2003-2010.

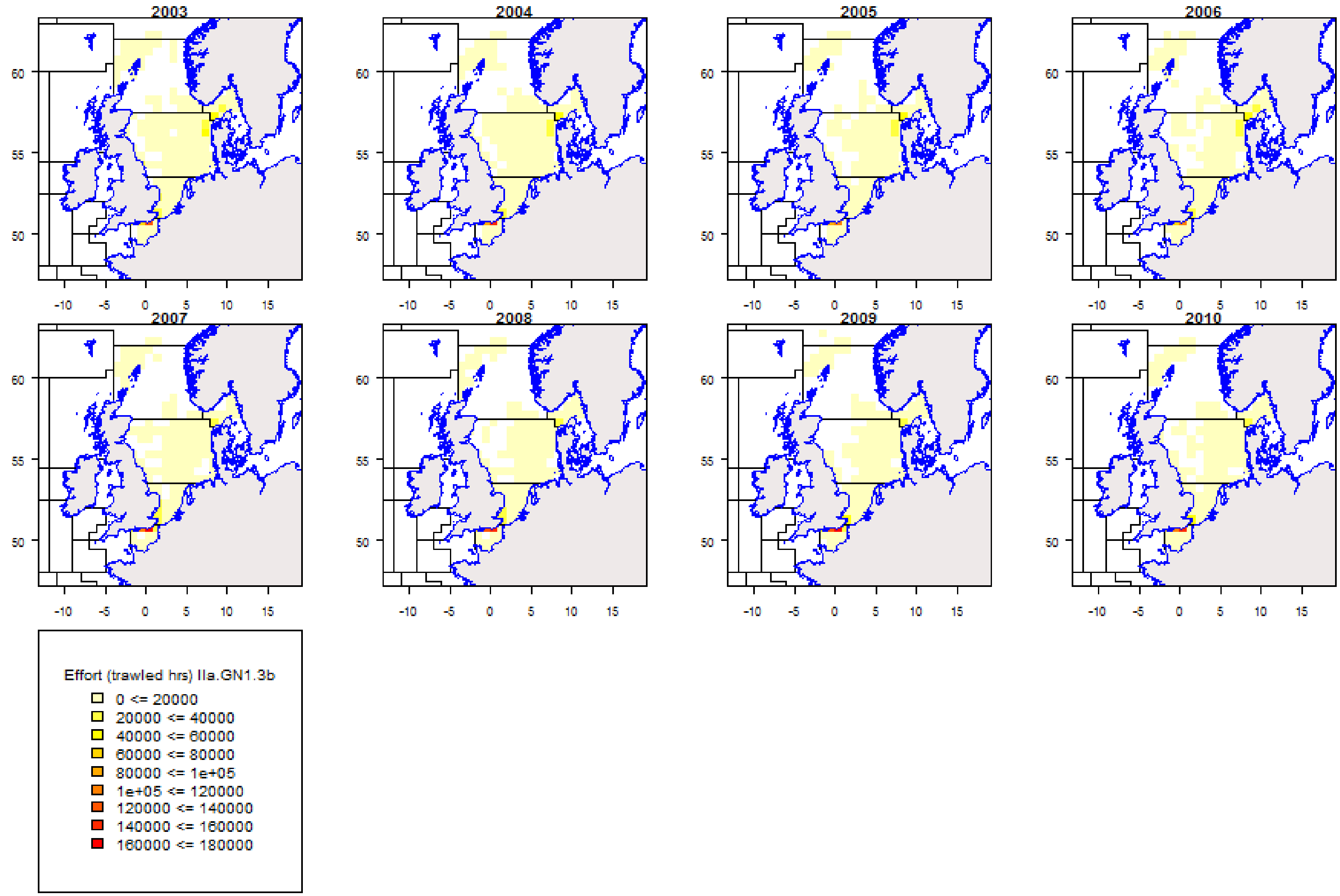


Figure 6.3.7.6 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of GN1 gears 2003-2010.

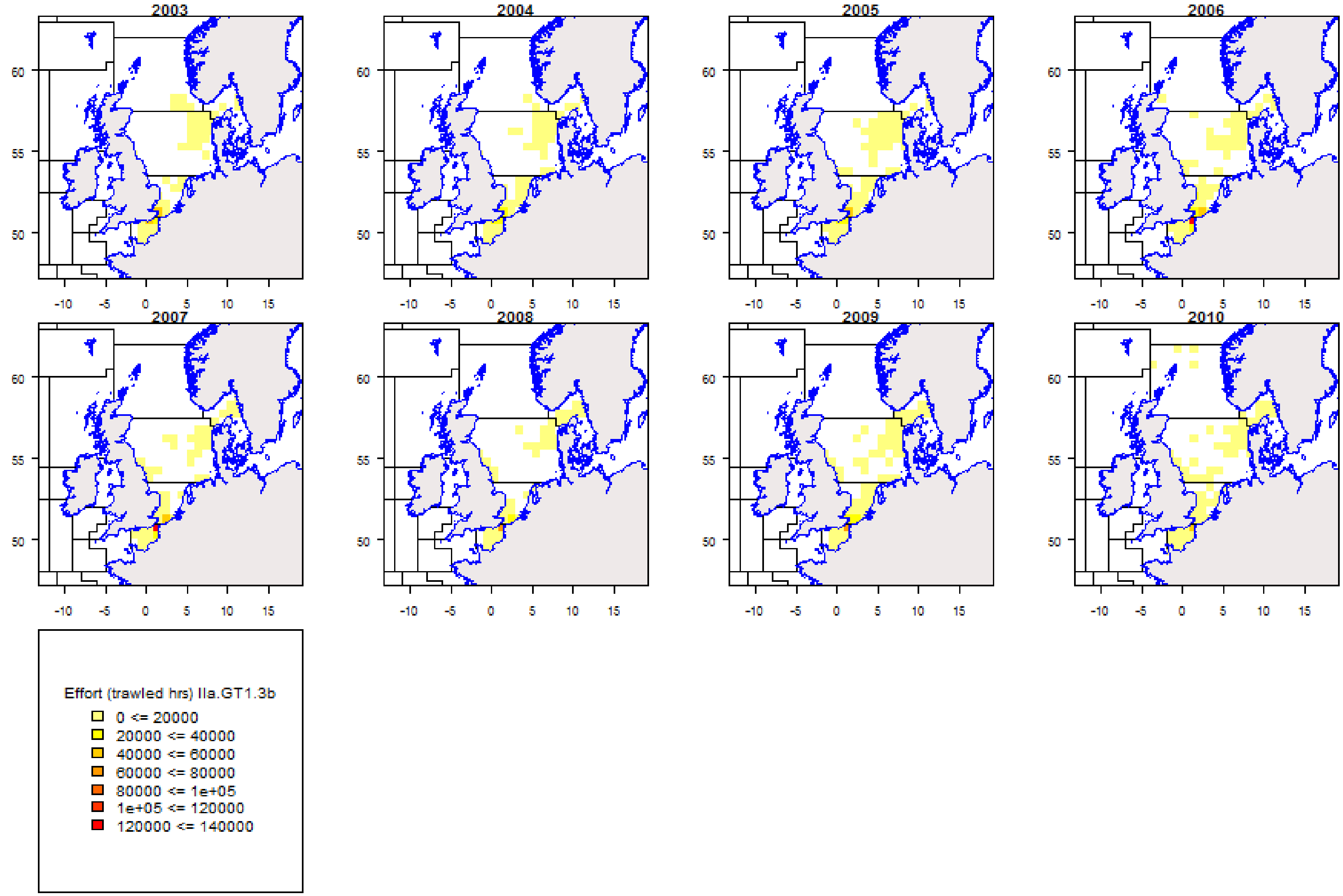


Figure 6.3.7.7 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of GT1 gears 2003-2010.

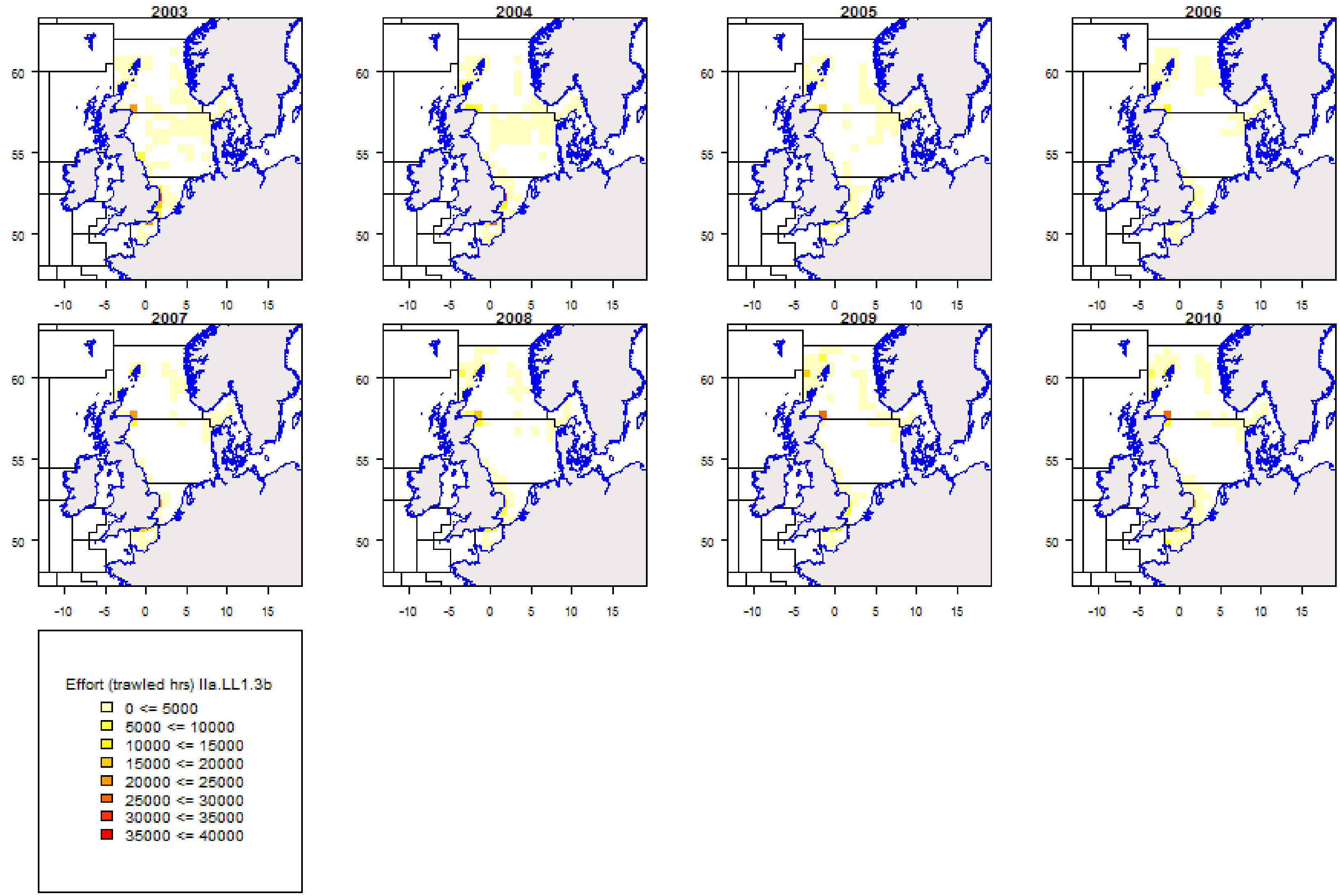


Figure 6.3.7.8 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of LL1 gears 2003-2010.

6.3.8. Fully Documented Fisheries (FDF) with Remote Electronic Monitoring/CCTV in the Skagerrak, North Sea and Eastern Channel

Table 6.3.8.1 shows that during 2010 nominal fishing effort (KW*days) by vessels operating in Fully Documented Fisheries (FDF) trials in the Skagerrak, North Sea and Eastern Channel was a small proportion of the total effort (2.2%), but was significant for the main cod gear (14% of effort by otter trawls of ≥120 mm mesh size (TR1)). Cod catches were recorded in fisheries using TR1, TR2, GN1 and Pots (Table 6.3.8.2), but most catches (96% of total FDF catches) were whilst vessels were using the TR1 gear. In total, 10% of cod catches by EU vessels were taken during FDF trials; 23%, 15% and 10% of English, Scottish and Danish cod catches respectively.

Table 6.3.8.1. Skagerrak, North Sea and Eastern Channel: (a) Fully Documented fisheries (REM/CCTV) nominal fishing effort (KW days), (b) total fishing effort and (c) the percentage of total effort attributable to FDFs.

(a)

	3b																Grand Total
COUNTRY	BEAM	BT1	BT2	DEM_SEINE	DREDGE	GN1	GT1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	TR3	
DEN									3170			2420	983	1038901	10290		1055764
ENG					9847	22101							597	425333			457878
SCO														1531775	81403		1613178
Grand Total					9847	22101			3170			2420	1580	2996009	91693		3126820

(b)

	3b																Grand Total
COUNTRY	BEAM	BT1	BT2	DEM_SEINE	DREDGE	GN1	GT1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	TR3	
BEL	496102	486680	4368821		84606	196692	41780	3047						220777	638857	3536	6540898
DEN	944206	569744	3678		263639	1567471	178830	48293	74304	5540793	666954	3993114	7477	3933189	3189707	1077111	22058510
ENG	476967	202685	3528676	4500	866214	189550	25367	57724		15401		888582	1495377	1685226	1720026	718	11157013
FRA	23617		610829		163222	100810	2431158	166766		153569		1224046	717970	2004742	8070194	148174	15815097
GBG													17960				17960
GBJ																	
GER	5519854	884	1801775		64370	276024	1188			116073		642517		1831265	464345		10718295
IOM					24203												24203
IRL												274912	181341				456253
LIT										49674		5742					55416
NED	5213264	488309	28648855	38466	462376	357091	37399			73483	5453	2522113	12594	1415882	1936340	31973	41243598
NIR										20470	16000	110853		29360	398498		575181
SCO			144306	905	2616884	440579		301689	41037	857080	1006	1132259	1053821	10444829	8302801	27524	25364720
SWE						67326	21260	6600	84661	2927617	444910	627863	504260	207882	1360491	1986	6254856
Grand Total	12674010	1748302	39106940	43871	4545514	3195543	2736982	584119	200002	9754160	1134323	11422001	3990800	21773152	26081259	1291022	140282000

(c)

	BEAM	BT1	BT2	DEM_SEINE	DREDGE	GN1	GT1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	TR3	
DEN	0.0%	0.0%	0.0%	--	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.1%	13.1%	26.4%	0.3%	0.0%	4.8%
ENG	0.0%	0.0%	0.0%	0.0%	1.1%	11.7%	0.0%	0.0%	--	0.0%	--	0.0%	0.0%	25.2%	0.0%	0.0%	4.1%
SCO	--	--	0.0%	0.0%	0.0%	0.0%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.7%	1.0%	0.0%	6.4%
Grand Total	0.0%	0.0%	0.0%	0.0%	0.2%	0.7%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	13.8%	0.4%	0.0%	2.2%

Table 6.3.8.2. Skagerrak, North Sea and Eastern Channel: (a) Fully Documented fisheries (REM/CCTV) catches (tonnes), (b) total catches, and (c) the percentage of catches attributed to FDFs.

(a)

	3b																Grand Total
COUNTRY	BEAM	BT1	BT2	DEM_SEINE	DREDGE	GN1	GT1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	TR3	
DEN														969			969
ENG					0	132							5	288			425
SCO														2330	16		2346
Grand Total					0	132							5	3587	16		3740

(b)

	3b																Grand Total
COUNTRY	BEAM	BT1	BT2	DEM_SEINE	DREDGE	GN1	GT1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	TR3	
BEL	26	236	376		0	36	5	0	0	0			0	17	135	0	831
DEN	0	57	0	0	1	2759	149	129	5	71		4	0	4325	2296	1	9797
ENG	0	1	96	0	0	127	15	29		0		0	8	1211	375	0	1862
FRA	0		1		0	37	194	2	0	5	0	2	3	44	2320	12	2620
GBJ			0												0		0
GER	0	0	88	0		371	0			0		0		2786	199	0	3444
IRL					0					0				0	0		0
NED	25	28	1557	10		43	33	0	0	10		23		1035	516	5	3285
NIR		0	0		0					0				2	59		61
SCO	0	0	9	0	2	1		2	0	1	3		0	14065	1465	0	15548
SWE						10	14	125	22	195			1	302	340	0	1009
Grand Total	51	322	2127	10	3	3384	410	287	27	282	3	29	12	23787	7705	18	38457

(c)

	BEAM	BT1	BT2	DEM_SEINE	DREDGE	GN1	GT1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	TR3	
DEN	--	0.0%	--	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	--	0.0%	--	22.4%	0.0%	0.0%	9.9%
ENG	--	0.0%	0.0%	--	--	103.9%	0.0%	0.0%	--	--	--	--	62.5%	23.8%	0.0%	--	22.8%
SCO	--	--	0%	--	0%	0%	--	0%	--	0%	0%	--	--	17%	1%	--	15%
Grand Total	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	42%	15%	0%	0%	10%

* ENG GN1 catches of cod are higher under the FDF trials than in total, which is likely due to a coding error in the database which is being investigated and will be corrected for the next meeting.

6.4. *Management area 3c: Irish Sea*

6.4.1. Trends in nominal effort

Effort within the Irish Sea has been compiled for kW*days-at-sea, GT*days-at-sea, and numbers of vessels. Within the report focus is on kW*Days at sea. Information on GT*days at sea and numbers of vessels is available via the website:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

Tables 6.4.1.1 detail nominal effort by nation, in kW*days-at-sea, according to Annex I of Coun. Reg. 1342/2008 (new cod plan). In comparison with 2010 data submissions, the majority of submissions are the same are those from the previous year. Belgium made changes to TR2 (increased) and BT2 (decreased) (Tables 6.4.1.2).

Nominal effort (kW*days-at-sea) within the Irish Sea has decreased by 33% since 2000 (Table 6.4.1.3). The overall trend indicates a gradual decline since 2004 of 23%, levelling out in 2010.

In relation to effort by gear, discussions are primarily focused on data from 2003 onwards. This is due to the unavailability of Irish mesh size information prior to 2003 resulting in all Irish effort occurring within the 'none' category which encompasses unidentified effort and effort by gears and mesh sizes not regulated under the cod plan. The proportion of effort within the 'none' category decreased in 2003 once Irish mesh size information became available. Effort within this category increased over the last four years, currently accounting for over 30% of Irish Sea effort (see Section 6.4.5 for a detailed description of this category).

Irish Sea fisheries are dominated by demersal trawling and seining (TR group), accounting for around 60% of effort and the overall effort trend is mirrored by this group (Figure 6.4.1.1). In 2010 the proportion of TR effort has declined to 55%, lower than previous years. The TR2 category (70-99mm mesh sizes) dominates (Table 6.4.1.3 and Figure 6.4.1.2) within the group, and effort had been relatively stable over time. In 2009 a reduction occurred coinciding with the introduction of the cod plan, 2010 effort was similar to that of 2009 levels. The majority of TR2 effort is now carried out under Article 13 of Coun. Reg. 1342/2008 (CPart13; 75-80% of TR2 effort). A small amount of effort, 4%, transferred from CPart13 to total exemption from the cod plan effort restrictions under Article 11 of the regulation (CPart11). Effort within TR1 (≥100mm mesh sizes) has been relatively stable at a comparatively low level after 2007, following a large decline. The majority of TR1 effort is now assigned to CPart13 (79-84%).

Beam trawling, solely BT2, declined greatly until 2008, and has shown a relatively stable low level of effort over the past three years (Table 6.4.1.3), accounting for 10% of Irish Sea effort. Note, Belgium beam trawl effort within the Irish Sea contains assumed mesh sizes, as described in Section 5.5.2.

Of the remaining regulated gears, gillnetting occurs at very low levels ~0.5% (Figure 6.4.1.1) while GT1 and LL1 show negligible effort accounting for less than 0.5% of effort combined.

Table 6.4.1.1. Irish Sea trends in nominal effort (kW*days at sea) by gear groups of Annex I, Coun. Reg. 1342/2008 and Member State, 2000-2010. Sorted by gear, derogation (SPECON), and country. Data qualities are summarised in Section 5

ANNEX	AREA	GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IIa	3c	TR1	CPART13	ENG										21860	25111
IIa	3c	TR1	CPART13	NIR										384860	350609
IIa	3c	TR1	CPART13	SCO											1663
IIa	3c	TR1	none	ENG	255172	363705	299745	399886	197351	94201	68905	16846	5932		
IIa	3c	TR1	none	FRA	116211	296262	1411907	264447	167253	180515	109174	67487	19701	19701	6668
IIa	3c	TR1	none	IOM	21107	511	1204	9070	362	172		649	895		
IIa	3c	TR1	none	IRL				358720	134384	87263	84550	140393	73005	60348	95243
IIa	3c	TR1	none	NED									442		
IIa	3c	TR1	none	NIR	1342936	1613525	1846273	2053909	1161889	872476	785380	340235	510151		
IIa	3c	TR1	none	SCO	111174	119211	84432	92516	32104	3889	3104				
IIa	3c	TR2	CPART11	IRL											156988
IIa	3c	TR2	CPART11	SCO											9055
IIa	3c	TR2	CPART13	ENG										171656	180844
IIa	3c	TR2	CPART13	IOM										23022	23928
IIa	3c	TR2	CPART13	IRL										35827	163894
IIa	3c	TR2	CPART13	NIR										3097345	2777583
IIa	3c	TR2	CPART13	SCO										30815	17981
IIa	3c	TR2	none	BEL					13541	43486	34052	76789	67534	29980	14283
IIa	3c	TR2	none	ENG	474125	336156	260431	211774	347848	287791	247447	244461	219456		
IIa	3c	TR2	none	FRA	25705	9827	4712	588		2352		810			
IIa	3c	TR2	none	GBJ	530										
IIa	3c	TR2	none	IOM	18286	24145	17282	18628	10826	27205	5427	29763	14592		
IIa	3c	TR2	none	IRL				1194560	1345093	1464635	1458919	1582398	1311139	817332	866140
IIa	3c	TR2	none	NIR	3855689	3869187	2915651	3366613	3110597	3185141	2951782	3125387	3345023		
IIa	3c	TR2	none	SCO	64109	34258	18499	44655	93771	34416	7435	16808	21995		
IIa	3c	TR3	none	DEN				992							
IIa	3c	TR3	none	ENG				134							
IIa	3c	TR3	none	IRL				900	90	3305	960		436		
IIa	3c	BT2	none	BEL	1273518	1791577	2078795	1884843	1482831	1694567	1153947	956953	554841	624989	649225
IIa	3c	BT2	none	ENG	118613	193846	110672	172354	68579	161500	59199	31112	17349	5808	1598
IIa	3c	BT2	none	GBJ	18484	22377	27803	40878	42260	3542					
IIa	3c	BT2	none	IRL				783381	411352	511815	481404	550533	374494	173927	245246
IIa	3c	BT2	none	NED	206768		1750			5884					
IIa	3c	BT2	none	SCO								1074	1378		
IIa	3c	GN1	none	ENG	22741	12716	12438	14872	12326	10011	8378	3930	4297	684	2260
IIa	3c	GN1	none	FRA						838					
IIa	3c	GN1	none	IRL	11031	27746	57472	76613	60549	26672	29531	45081	40957	22212	32512
IIa	3c	GN1	none	NED		660					161				
IIa	3c	GN1	none	NIR	1332	2442	4329		222					2140	
IIa	3c	GN1	none	SCO						895					
IIa	3c	GT1	none	ENG	523						475	656	1066	2788	984
IIa	3c	GT1	none	IRL									1327	1237	
IIa	3c	LL1	none	ENG	180243	171126	86688	44138	58414	93773	59656	12238	840	924	
IIa	3c	LL1	none	FRA			1200								
IIa	3c	LL1	none	IRL		955			800				149		1412
IIa	3c	LL1	none	SCO		13284		3247							
Total of regulated gears					**8118297**	**8903516**	**9241283**	**11037718**	**8752442**	**8796344**	**7549886**	**7243603**	**6586999**	**5527455**	**5623227**
IIa	3c	none	none	BEL		6808		528					53686		41044
IIa	3c	none	none	ENG	350180	417861	584819	648435	546205	596426	690431	590740	508704	443313	478027
IIa	3c	none	none	FRA				1694				906	2844	2844	1180
IIa	3c	none	none	GBG									397	11116	1119
IIa	3c	none	none	GBJ	113032	33456	72836	74180	76378	17726	11996	35952	53928	78825	62274
IIa	3c	none	none	IOM	11127	7319	7564	10154	6782	5194	10315	13983	47908	32458	51603
IIa	3c	none	none	IRL	3272681	2864252	2912408	532033	823155	410194	345725	436158	394646	422541	959189
IIa	3c	none	none	NED	3960	7428	4412		14520	12797	525	4725	54075	17118	3960
IIa	3c	none	none	NIR	296728	332759	237965	303426	256628	249139	274800	300976	352645	325338	335529
IIa	3c	none	none	SCO	703739	1003811	805622	901594	725105	807055	603817	940517	1260522	1371630	1013635
Total of unregulated gears					**4751447**	**4673694**	**4625626**	**2472044**	**2448773**	**2098531**	**1937609**	**2323957**	**2729355**	**2705183**	**2947560**
Overall Total					**12869744**	**13577210**	**13866909**	**13509762**	**11201215**	**10894875**	**9487495**	**9567560**	**9316354**	**8232638**	**8570787**

Table 6.4.1.2. Irish Sea relative differences in nominal effort (kW*days at sea) 2010 submissions by Member State by Annex I, Coun. Reg. 1342/2008. Sorted by gear, derogation (SPECON), and country.

ANNEX	REG AREA	REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
IIa	3c	BEAM	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	BEAM	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	BEAM	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	BT2	BEL	0	0	0	0	0	0	0	-0.162	0	-0.044
IIa	3c	BT2	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	BT2	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3c	BT2	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	BT2	NED	0	0	0	0	0	0	0	0	0	0
IIa	3c	BT2	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	DEM_SEINI	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	DEM_SEINI	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	BEL	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	IOM	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	NED	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	DREDGE	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	GN1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	GN1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	GN1	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	GN1	NED	0	0	0	0	0	0	0	0	0	0
IIa	3c	GN1	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	GN1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	GT1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	GT1	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	LL1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	LL1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	LL1	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	LL1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	none	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	none	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	none	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	OTTER	BEL	0	0	0	0	0	0	0	0	0	0
IIa	3c	OTTER	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	OTTER	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	OTTER	NED	0	0	0	0	0	0	0	0	0	0
IIa	3c	OTTER	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	OTTER	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_SEINE	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_SEINE	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_SEINE	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_TRAW	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_TRAW	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_TRAW	NED	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_TRAW	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	PEL_TRAW	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	GBG	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	IOM	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	POTS	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	IOM	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	NED	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR1	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	BEL	0	0	0	0	0	0	0	0	0	0.028
IIa	3c	TR2	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	FRA	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	GBJ	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	IOM	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	IRL	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	NIR	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR2	SCO	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR3	DEN	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR3	ENG	0	0	0	0	0	0	0	0	0	0
IIa	3c	TR3	IRL	0	0	0	0	0	0	0	0	0	0

Table 6.4.1.3 Trend in nominal effort (kW*days at sea) by effort group (Coun. Reg. 1342/2008), 2000-2010.

Annex	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Relative change to 2004	Relative change to 2009
IIa	3c	TR1	CPART13										406720	377383	NA	-0.07
IIa	3c	TR1	none	1846600	2393214	3643561	3178548	1693343	1238516	1051113	565610	610126	80049	101911	-0.94	0.27
IIa	**3c**	**TR1 Total**		**1846600**	**2393214**	**3643561**	**3178548**	**1693343**	**1238516**	**1051113**	**565610**	**610126**	**486769**	**479294**	**-0.72**	**-0.02**
IIa	3c	TR2	CPART11											166043	NA	NA
IIa	3c	TR2	CPART13										3358665	3164230	NA	-0.06
IIa	3c	TR2	none	4438444	4273573	3216575	4836818	4921676	5045026	4705062	5076416	4979739	847312	880423	-0.82	0.04
IIa	**3c**	**TR2 Total**		**4438444**	**4273573**	**3216575**	**4836818**	**4921676**	**5045026**	**4705062**	**5076416**	**4979739**	**4205977**	**4210696**	**-0.14**	**0.00**
IIa	3c	TR3	none				2026	90	3305	960		436			-1.00	NA
IIa	**3c**	**TR3 Total**					**2026**	**90**	**3305**	**960**		**436**			**-1.00**	**NA**
IIa	3c	BT2	none	1617383	2007800	2219020	2881456	2005022	2377308	1694550	1539672	948062	804724	896069	-0.55	0.11
IIa	**3c**	**BT2 Total**		**1617383**	**2007800**	**2219020**	**2881456**	**2005022**	**2377308**	**1694550**	**1539672**	**948062**	**804724**	**896069**	**-0.55**	**0.11**
IIa	3c	GN1	none	35104	43564	74239	91485	73097	38416	38070	49011	45254	25036	34772	-0.52	0.39
IIa	**3c**	**GN1 Total**		**35104**	**43564**	**74239**	**91485**	**73097**	**38416**	**38070**	**49011**	**45254**	**25036**	**34772**	**-0.52**	**0.39**
IIa	3c	GT1	none	523						475	656	2393	4025	984	NA	-0.76
IIa	**3c**	**GT1 Total**		**523**						**475**	**656**	**2393**	**4025**	**984**	**NA**	**-0.76**
IIa	3c	LL1	none	180243	185365	87888	47385	59214	93773	59656	12238	989	924	1412	-0.98	0.53
IIa	**3c**	**LL1 Total**		**180243**	**185365**	**87888**	**47385**	**59214**	**93773**	**59656**	**12238**	**989**	**924**	**1412**	**-0.98**	**0.53**
IIa	**3c**	**none**	**none**	**4751447**	**4673694**	**4625626**	**2472044**	**2448773**	**2098531**	**1937609**	**2323957**	**2729355**	**2705183**	**2947560**	**0.20**	**0.09**
Grand Total				**12869744**	**13577210**	**13866909**	**13509762**	**11201215**	**10894875**	**9487495**	**9567560**	**9316354**	**8232638**	**8570787**	**-0.23**	**0.04**

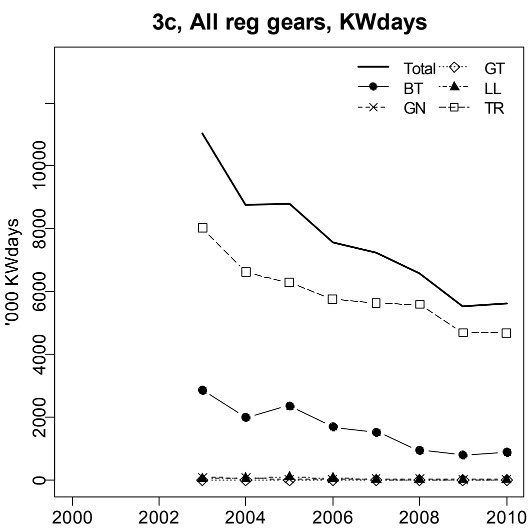


Figure 6.4.1.1. Irish Sea. Trend in regulated gear nominal effort (kW*days-at-sea) by Coun. Reg. 1342/2008, 2003-2010.

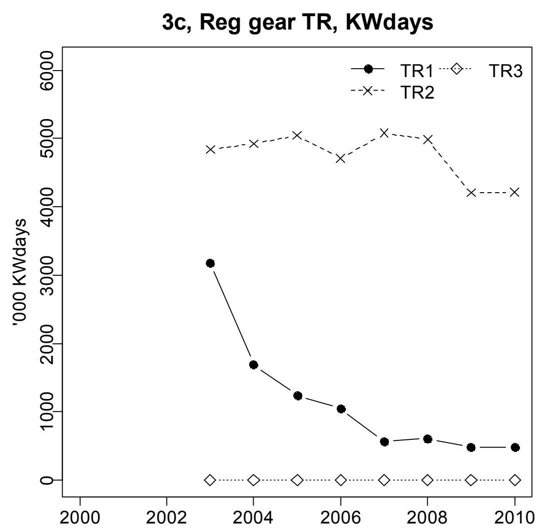


Figure 6.4.1.2. Irish Sea. Trend in regulated gear TR (demersal trawl and Danish seine) nominal effort (kW*days-at-sea) by Coun. Reg. 1342/2008, 2003-2010.

6.4.2. Trend in catch estimates in weight and numbers at age

Table 6.4.2.1 lists the landings and available discards for the main species by gear groups relating to Coun. Reg. 1342/2008. For the reason of space limitation of this report, the following sections represent the landings in weight and numbers for monkfish (ANF), cod (COD), haddock (HAD), hake, (HKE), Nephrops (NEP), plaice (PLE), saithe (POK), rays (RAJ), sole (SOL), and whiting (WHG). Additional data queries for other species can be provided depending on data provisions of the national catches by the experts or national institutes. The data given in the table forms the basis of Figure 6.4.2.1 displaying the relative landings compositions by gear groups for the years 2003-2010.

Discard information available within the Irish Sea is incomplete. Discard data is not available for all species and/or years within each gear grouping. TR2 has the most complete data, for cod, haddock, hake, plaice, rays, and whiting. However, cod, haddock and hake discards for either 2009 or 2010 were not available. Availability of discard information is sporadic in TR1. Data availability for BT2 has increased in most recent years where previously data was sporadic. No gillnet discard information for the Irish Sea was provided to the group. The primary gear categories with landings from the Irish Sea are discussed. As a first note, inaccurate area reporting of cod from ICES rectangles immediately north of the Irish Sea–Celtic Sea boundary (ICES rectangles 33E2 and 33E3) is known to be an issue for Ireland, with ICES division VIIg cod catches being reported into the southern Irish Sea. This primarily relates to gillnet and otter trawl gear types. WGCSE has reallocated cod from VIIa to the Celtic Sea for a number of years, ranging between ~50t and >500t annually since 2004. This inaccurate reporting has not been corrected for within the data provided to the EWG .

Landings of *Nephrops*, the primary target species within the Irish Sea, increased from 2006 to 2008 following a period of relative stability. Landings in the last two years have reduced, although remaining above pre-2007 levels. Whiting and haddock are primarily landed by the TR groups, both of which showed a peak in 2007. Since then, whiting landings dropped in 2008 with a subsequently increasing tend in the last three years and haddock landings continued at a fluctuating higher level than pre-2007. Cod landings have declined for the second year, halving in 2009, although landings from the TR2 category increased in 2010. Plaice, sole and anglerfish show declining landings over the period, probably owing to the decline in beam trawling, the primary gear type landing these species. Landing declines are also seen within the TR gears.

In relation to gear group species composition, TR2 primarily lands *Nephrops* with other components occurring at comparatively low levels, such as cod, haddock, whiting, plaice, and anglerfish (Figure 6.4.2.1). This category has consistently accounted for around a third (26%-39%) of cod landings from ≥10m vessels. Discarding of haddock, plaice and whiting occurs within this gear category and can be high in some years, particularly for whiting.

The species composition of TR1, the larger mesh size group, is very different to TR2, containing virtually no *Nephrops*. Landings primarily consist of cod and haddock, with lower quantities of hake. A variety of other species occur at low levels including, plaice and whiting (Figure 6.4.2.1). This category accounts for the greatest annual cod landings, typically around 40%. TR1 consistently accounts for the majority of both haddock (>50%) and hake (>65%) landings.

Beam trawls operating within the Irish Sea belong solely to the BT2 (80-119mm) category. Belgium (and the Netherlands) beam trawls are assumed to have used the minimum mesh size group 80-89mm (Sec. 5.5.2). No assumptions are made for the remaining nations.

The species composition of this category is stable, dominated by sole, plaice, and rays. The proportion of the latter has increased over time, particularly in 2010, whilst sole and plaice have remained relatively consistent (Figure 6.4.2.1). Low level landings of anglerfish, cod, and haddock (~5%, or less) also occur and have declined over the period. Beam trawling accounts for roughly 50% of plaice landings, as well as the majority of sole landings (>80%) from vessels ≥10m. Although plaice is a target of this gear category, recent discard data shows between 30% and 40% of the catch is discarded.

The primary target of Irish Sea gillnets is cod, which dominate the low level landings (Figure 6.4.2.1). Although the main target of this gear category is cod, landings are low and in most years account for <15% of total Irish Sea cod landed. Landings from 2007 and 2008 were over double any other year resulting in a proportion of ~30%. Minimal levels of other species are landed.

Landing and discard numbers at age for cod, plaice and sole are illustrated in Figures 6.4.2.2-6.4.2.8 for the gear groups primarily landing these three species. No age information was provided for gillnets. Additional species specific data queries could be provided on request depending on data provisions by the experts or national institutes. Information on weights-at-age were not considered to be adequate and are not discussed.

Cod age information shows that within TR1 (only available for earlier years) and TR2, landings are recorded from age 1 to 8 with a constriction of age range in more recent years. The majority landed are age 2 and in some years age 2 and 3. Discards occur primarily at age 1 and 2 (Figure 6.4.2.2). Cod data is limited in BT2 for some years so that little can be deduced on the recent exploitation pattern, although there is some similarity with the TR groups in previous years (Figure 6.4.2.3).

Plaice numbers-at-age within TR2 are shown in Figure 6.4.2.4. The quantity of numbers discarded is far higher than those landed. There is no clear pattern in landed plaice at age. Discards appear to occur across the majority of ages, particularly ages 2 to 5. Little information is available for the TR1 group. The BT2 group show landings occurring across much of the age range presented, particularly 3 to 5 in the earlier period shifting slightly to age 4 and 5 in the latest year. Discarding occurs with a similar age range as TR2, primarily of ages 2 to 5 (Figure 6.4.2.5). For this gear, age 1 plaice are rarely landed.

Sole is landed across a wide range of ages although the data shows greater numbers between age 2 and 5. Few discards are available for this species and gear combination. However, discards at age 2 within TR2 in 2010 are extraordinarily high (Figure 6.4.2.6). A wide range of ages are again landed by BT2, the majority of landings occur between age 3 and 5, peaking in most years at age 3 (Figure 6.4.2.8). Age 1 sole were only landed in a couple of years and in low numbers. Sole discarding by this gear is minimal.

Table 6.4.2.1 Irish Sea. Landings (t), discards (t) and discard rate by species and gear according to Coun. Reg. 1342/2008, 2004-2010.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Specon2	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
IIa	3c	ANF	TR1	CPart13																2	0	0	3	0	0
IIa	3c	ANF	TR1	none	122	0	0	53	0	0	36	0	0	22	0	0	10	10	0.5	6	0	0	7	0	0
IIa	3c	ANF	TR2	CPART11																			0	0	
IIa	3c	ANF	TR2	CPart13																91	0	0	64	5	0.07
IIa	3c	ANF	TR2	none	251	13	0.05	218	54	0.2	242	43	0.15	273	23	0.08	198	0	0	62	0	0	47	0	0
IIa	3c	ANF	TR3	none													0	0							
IIa	3c	ANF	BT2	none	175	0	0	184	0	0	123	0	0	114	1	0.01	56	1	0.02	43	0	0	35	0	0
IIa	3c	ANF	GN1	none	5	0	0	4	0	0	4	0	0	0	0		1	0	0	0	0		6	0	0
IIa	3c	ANF	LL1	none	0	0		0	0		0	0													
IIa	3c	ANF	none	none	36	5	0.12	2	0	0	2	0	0	13	0	0	4	0	0	0	0		0	0	
IIa	3c	COD	TR1	CPart13																289	0	0	199	0	0
IIa	3c	COD	TR1	none	445	0	0	374	0	0	416	0	0	339	0	0	467	0	0	73	0	0	42	0	0
IIa	3c	COD	TR2	CPART11																			0	0	
IIa	3c	COD	TR2	CPart13																96	0	0	88	247	0.74
IIa	3c	COD	TR2	none	394	292	0.43	371	182	0.33	309	67	0.18	423	127	0.23	310	41	0.12	88	0	0	122	21	0.15
IIa	3c	COD	BT2	none	125	0	0	156	0	0	78	0	0	107	20	0.16	31	1	0.03	18	11	0.38	40	30	0.43
IIa	3c	COD	GN1	none	117	0	0	55	0	0	131	0	0	329	0	0	392	0	0	78	0	0	78	0	0
IIa	3c	COD	GT1	none										1	0	0	1	0	0	1	0	0	2	0	0
IIa	3c	COD	LL1	none	1	0	0	2	0	0	3	0	0	1	0	0	12	0	0						
IIa	3c	COD	none	none	28	24	0.46	0	0		1	0	0	3	0	0	0	0		1	0	0	1	0	0
IIa	3c	HAD	TR1	CPart13																333	0	0	481	0	0
IIa	3c	HAD	TR1	none	366	0	0	306	51	0.14	447	0	0	588	0	0	471	250	0.35	221	2	0.01	200	0	0
IIa	3c	HAD	TR2	CPART11																			0	0	
IIa	3c	HAD	TR2	CPart13																106	0	0	114	923	0.89
IIa	3c	HAD	TR2	none	259	4043	0.94	189	1170	0.86	167	1942	0.92	441	5005	0.92	383	563	0.6	147	18	0.11	125	0	0
IIa	3c	HAD	TR3	none							0	0					0	0							
IIa	3c	HAD	BT2	none	25	0	0	34	5	0.13	28	0	0	32	14	0.3	9	6	0.4	8	4	0.33	9	7	0.44
IIa	3c	HAD	GN1	none	9	0	0	3	0	0	7	0	0	11	0	0	4	0	0	17	0	0	6	0	0
IIa	3c	HAD	LL1	none	0	0		0	0		0	0													
IIa	3c	HAD	none	none	35	45	0.56				2	0	0	1	0	0	4	0	0	2	0	0	1	0	0
IIa	3c	HKE	TR1	CPart13																138	0	0	132	0	0
IIa	3c	HKE	TR1	none	231	0	0	209	0	0	173	0	0	80	0	0	183	0	0	3	0	0	4	0	0
IIa	3c	HKE	TR2	CPART11																			0	0	
IIa	3c	HKE	TR2	CPart13																44	0	0	29	4	0.12
IIa	3c	HKE	TR2	none	85	545	0.87	98	404	0.8	58	83	0.59	67	72	0.52	45	189	0.81	11	0	0	10	7	0.41
IIa	3c	HKE	TR3	none													0	0							
IIa	3c	HKE	BT2	none	5	0	0	7	0	0	3	0	0	4	0	0	1	0	0	1	1	0.5	1	0	0
IIa	3c	HKE	GN1	none	8	0	0	5	0	0	5	0	0	5	0	0	1	0	0	1	0	0	1	0	0
IIa	3c	HKE	LL1	none	0	0		0	0		0	0		0	0										
IIa	3c	HKE	none	none	4	281	0.99	0	0		0	0		0	0		0	0		0	0		2	0	0
IIa	3c	NEP	TR1	CPart13																5	0	0	3	0	0
IIa	3c	NEP	TR1	none	40	0	0	20	0	0	25	0	0	23	0	0	24	0	0	8	0	0	1	0	0
IIa	3c	NEP	TR2	CPART11																			493	0	0
IIa	3c	NEP	TR2	CPart13																7235	0	0	6895	0	0
IIa	3c	NEP	TR2	none	7189	0	0	6937	0	0	7749	0	0	9375	0	0	10807	0	0	2279	0	0	1788	0	0
IIa	3c	NEP	TR3	none				0	0		0	0													
IIa	3c	NEP	BT2	none	1	0	0	0	0		2	0	0	1	0	0				0	0		0	0	
IIa	3c	NEP	GN1	none				9	0	0															

Table 6.4.2.1 continued.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Specon2	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
IIa	3c	NEP	none	none	335	0	0	1	0	0	13	0	0	6	0	0	49	0	0	17	0	0	2	0	0
IIa	3c	PLE	TR1	CPart13																8	0	0	11	0	0
IIa	3c	PLE	TR1	none	125	0	0	76	0	0	112	0	0	57	0	0	42	13	0.24	13	0	0	12	0	0
IIa	3c	PLE	TR2	CPART11																			0	0	
IIa	3c	PLE	TR2	CPart13																118	0	0	105	41	0.28
IIa	3c	PLE	TR2	none	366	774	0.68	409	1472	0.78	332	2965	0.9	377	194	0.34	258	413	0.62	44	83	0.65	38	872	0.96
IIa	3c	PLE	TR3	none							0	0					0	0							
IIa	3c	PLE	BT2	none	555	0	0	689	0	0	413	0	0	262	109	0.29	182	109	0.37	212	127	0.37	175	113	0.39
IIa	3c	PLE	GN1	none	0	0		2	0	0	0	0		0	0		0	0		0	0		0	0	
IIa	3c	PLE	GT1	none										0	0		0	0		0	0		0	0	
IIa	3c	PLE	none	none	49	76	0.61	4	0	0	1	0	0	1	0	0	2	0	0	0	0		0	0	
IIa	3c	POK	TR1	CPart13																13	0	0	3	0	0
IIa	3c	POK	TR1	none	173	64	0.27	64	14	0.18	20	0	0	3	0	0	9	0	0	0	0		2	0	0
IIa	3c	POK	TR2	CPart13																0	0		1	0	0
IIa	3c	POK	TR2	none	20	0	0	16	0	0	3	0	0	2	0	0	0	0		1	0	0	0	0	
IIa	3c	POK	TR3	none													0	0							
IIa	3c	POK	BT2	none	0	0		2	0	0	0	0		0	0		1	0	0	0	0		0	0	
IIa	3c	POK	GN1	none	25	0	0	3	0	0	4	0	0	10	0	0	1	0	0	1	0	0	1	0	0
IIa	3c	POK	GT1	none																0	0				
IIa	3c	POK	none	none	4	0	0				0	0		0	0								0	0	
IIa	3c	RAJ	TR1	none	160	0	0	122	0	0	98	0	0	73	0	0	51	2380	0.98	47	0	0	103	0	0
IIa	3c	RAJ	TR2	CPART11																			0	0	
IIa	3c	RAJ	TR2	CPart13																0	0		2	31	0.94
IIa	3c	RAJ	TR2	none	334	328	0.5	348	160	0.31	292	47	0.14	303	302	0.5	154	37	0.19	98	43	0.3	130	152	0.54
IIa	3c	RAJ	TR3	none													0	0							
IIa	3c	RAJ	BT2	none	126	0	0	372	0	0	259	0	0	344	0	0	293	576	0.66	220	1270	0.85	370	1087	0.75
IIa	3c	RAJ	GN1	none	2	0	0	29	0	0	1	0	0	0	0		4	0	0	2	0	0	15	0	0
IIa	3c	RAJ	GT1	none													2	0	0	1	0	0			
IIa	3c	RAJ	LL1	none	0	0																			
IIa	3c	RAJ	none	none	204	12	0.06	7	0	0	6	0	0	4	0	0	7	0	0	2	0	0	2	0	0
IIa	3c	SOL	TR1	CPart13																0	0		0	0	
IIa	3c	SOL	TR1	none	7	0	0	6	0	0	2	0	0	3	0	0	1	0	0	2	0	0	1	0	0
IIa	3c	SOL	TR2	CPART11																			0	0	
IIa	3c	SOL	TR2	CPart13																13	0	0	8	0	0
IIa	3c	SOL	TR2	none	30	0	0	36	12	0.25	42	0	0	76	0	0	37	2	0.05	15	0	0	14	34	0.71
IIa	3c	SOL	BT2	none	659	0	0	801	0	0	516	0	0	400	14	0.03	275	25	0.08	291	16	0.05	248	11	0.04
IIa	3c	SOL	GN1	none	0	0		0	0		0	0		0	0		0	0		0	0		0	0	
IIa	3c	SOL	GT1	none										0	0					0	0				
IIa	3c	SOL	none	none	10	0	0	4	0	0	2	0	0	4	0	0	1	0	0	0	0		0	0	
IIa	3c	WHG	TR1	CPart13																6	0	0	5	0	0
IIa	3c	WHG	TR1	none	72	4	0.05	40	11	0.22	19	0	0	91	0	0	47	12	0.2	52	4	0.07	48	0	0
IIa	3c	WHG	TR2	CPart13																6	10	0.63	11	739	0.99
IIa	3c	WHG	TR2	none	80	12548	0.99	104	1281	0.92	61	1872	0.97	97	9903	0.99	23	1538	0.99	26	1144	0.98	51	8700	0.99
IIa	3c	WHG	TR3	none							0	0					0	0							
IIa	3c	WHG	BT2	none	14	0	0	12	14	0.54	4	13	0.76	5	3	0.38	2	15	0.88	2	9	0.82	4	9	0.69
IIa	3c	WHG	GN1	none	6	0	0	1	0	0	0	0		1	0	0	1	0	0	0	0		0	0	
IIa	3c	WHG	LL1	none				0	0																
IIa	3c	WHG	none	none	17	499	0.97				0	0		2	0	0	6	0	0	0	0		0	0	

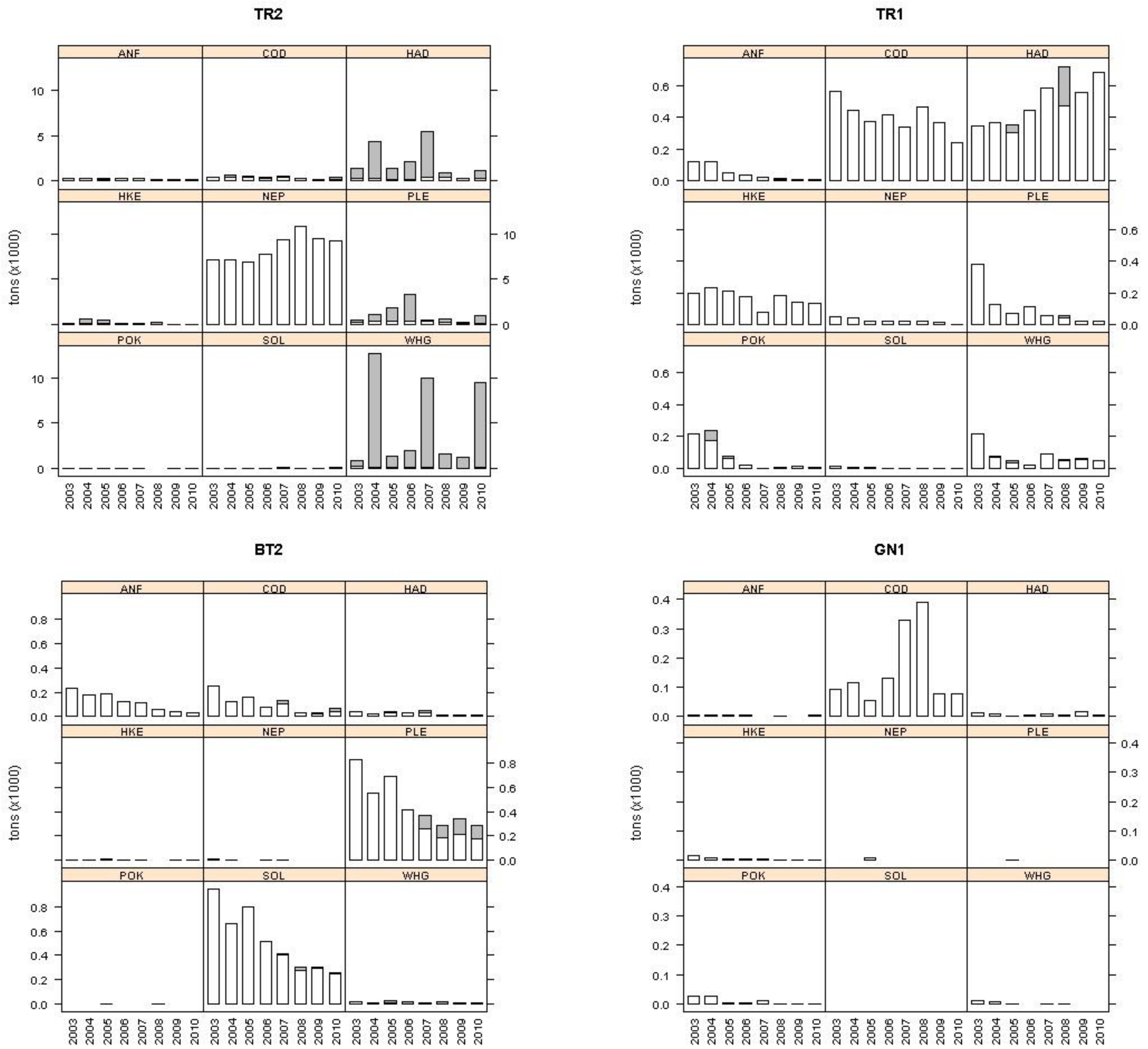


Figure 6.4.2.1 Irish Sea. Landings (t) by gear according to Coun. Reg. 1342/2008 and species, 2003-2010.

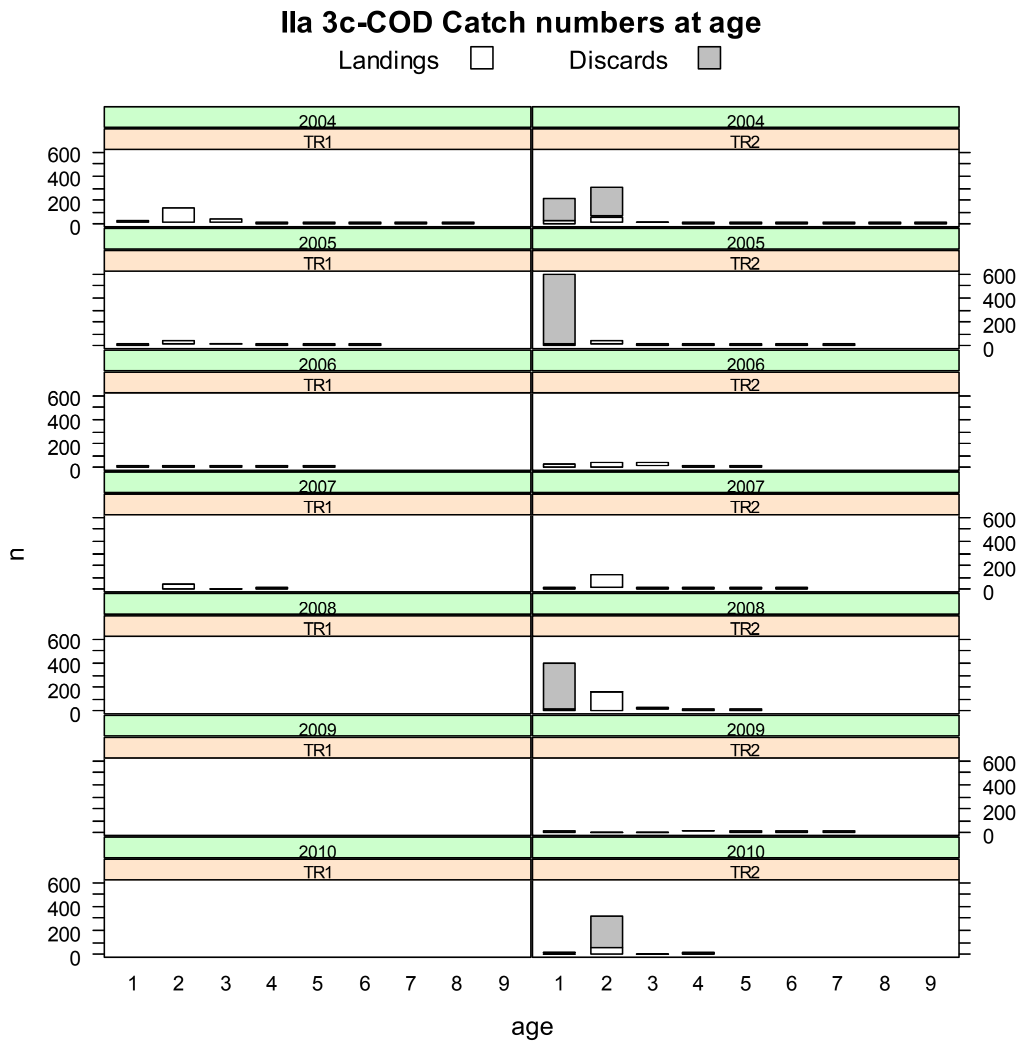


Figure 6.4.2.2 Irish Sea. Cod landings ('000) at ages 1-9 in TR1 and TR2 associated with Coun. Reg. 1342/2008, 2004-2010.

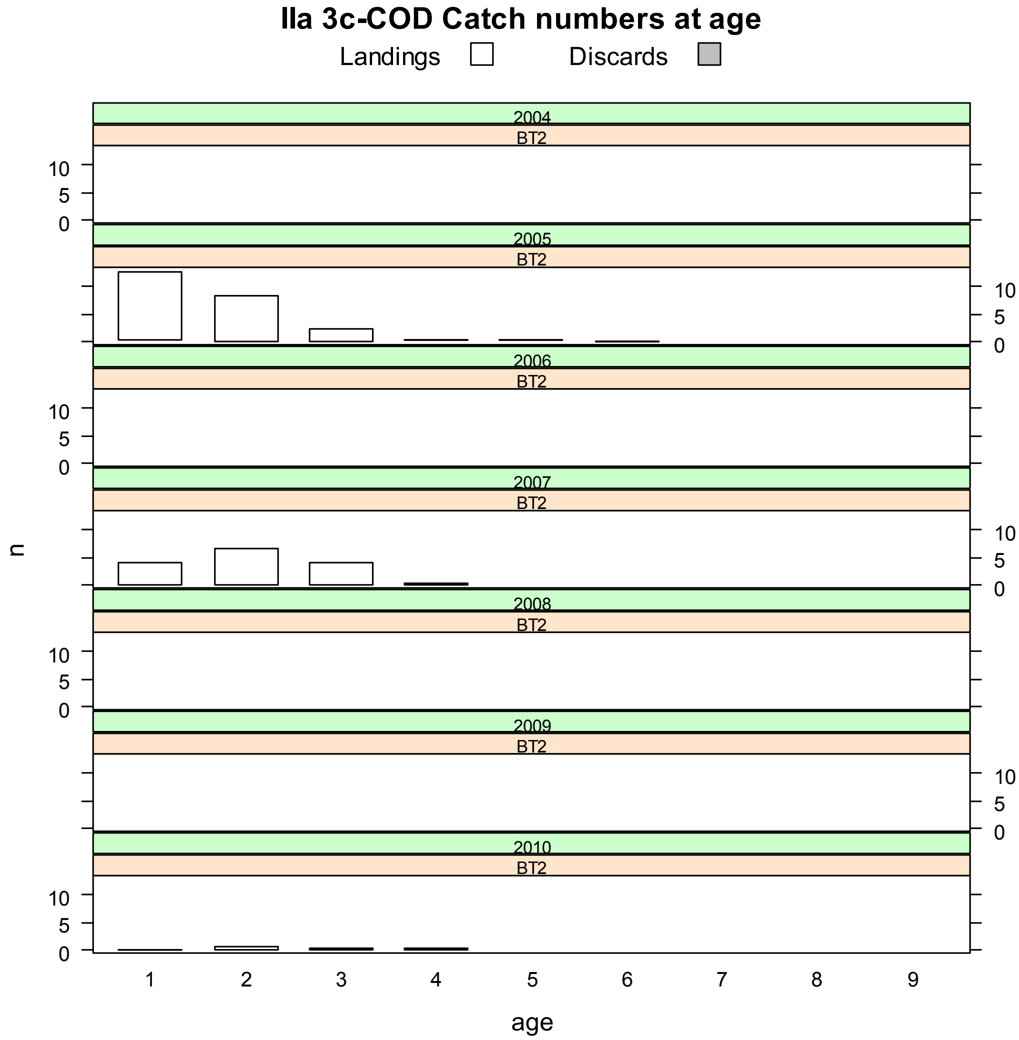


Figure 6.4.2.3 Irish Sea. Cod landings (‘000) at ages 1-9 in BT2 associated with Coun. Reg. 1342/2008, 2004-2010.

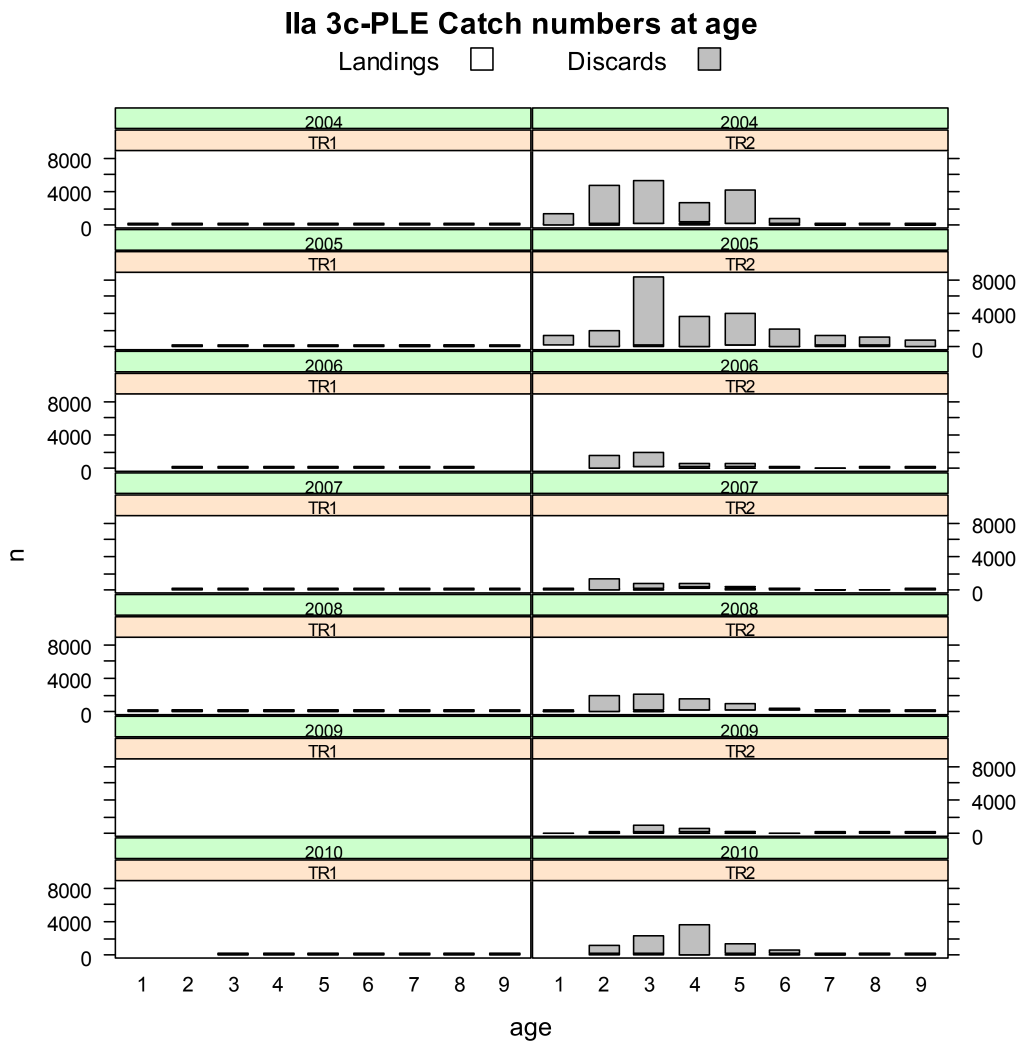


Figure 6.4.2.4 Irish Sea. Plaice landings ('000) at ages 1-9 in TR1 and TR2 associated with Coun. Reg. 1342/2008, 2004-2010.

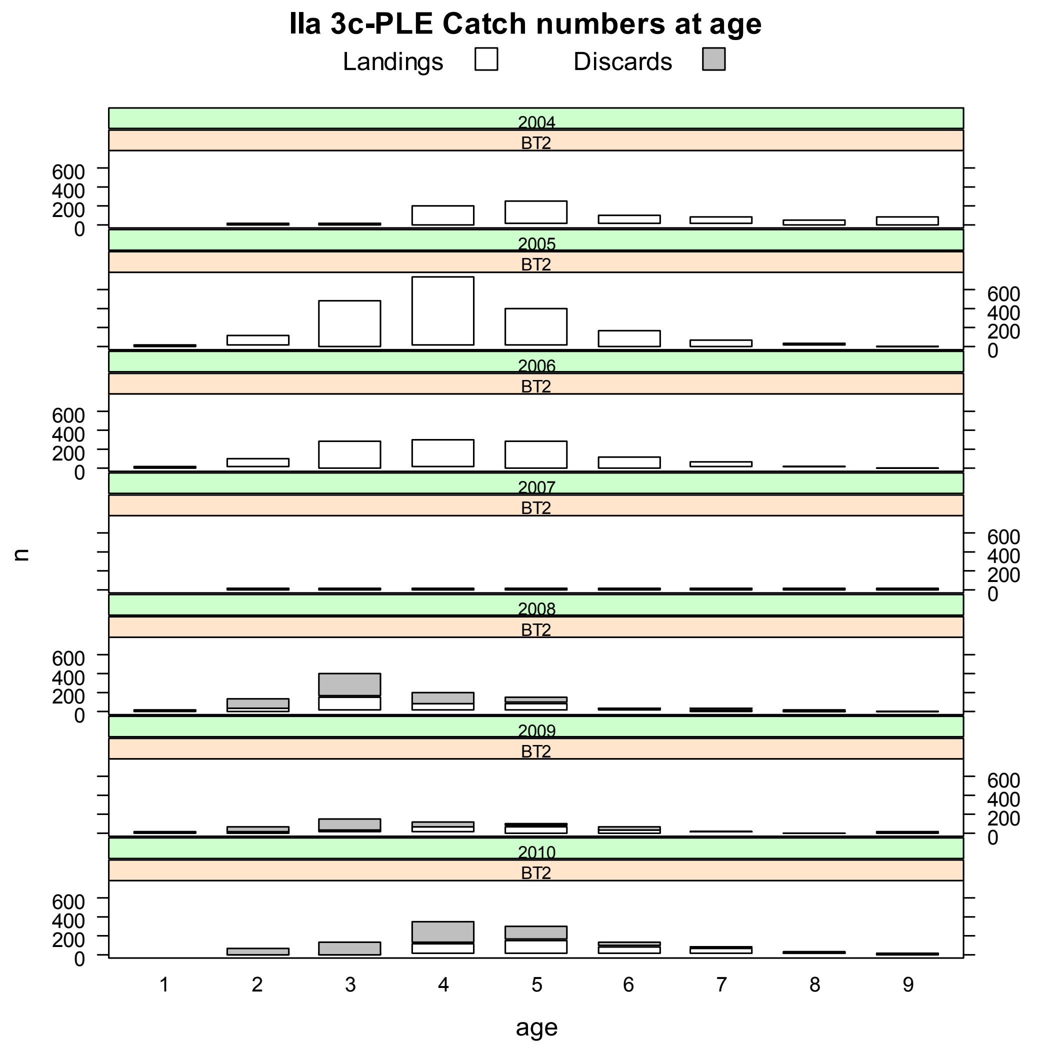


Figure 6.4.2.5 Irish Sea. Plaice landings ('000) at ages 1-9 in BT2 associated with Coun. Reg. 1342/2008, 2004-2010.

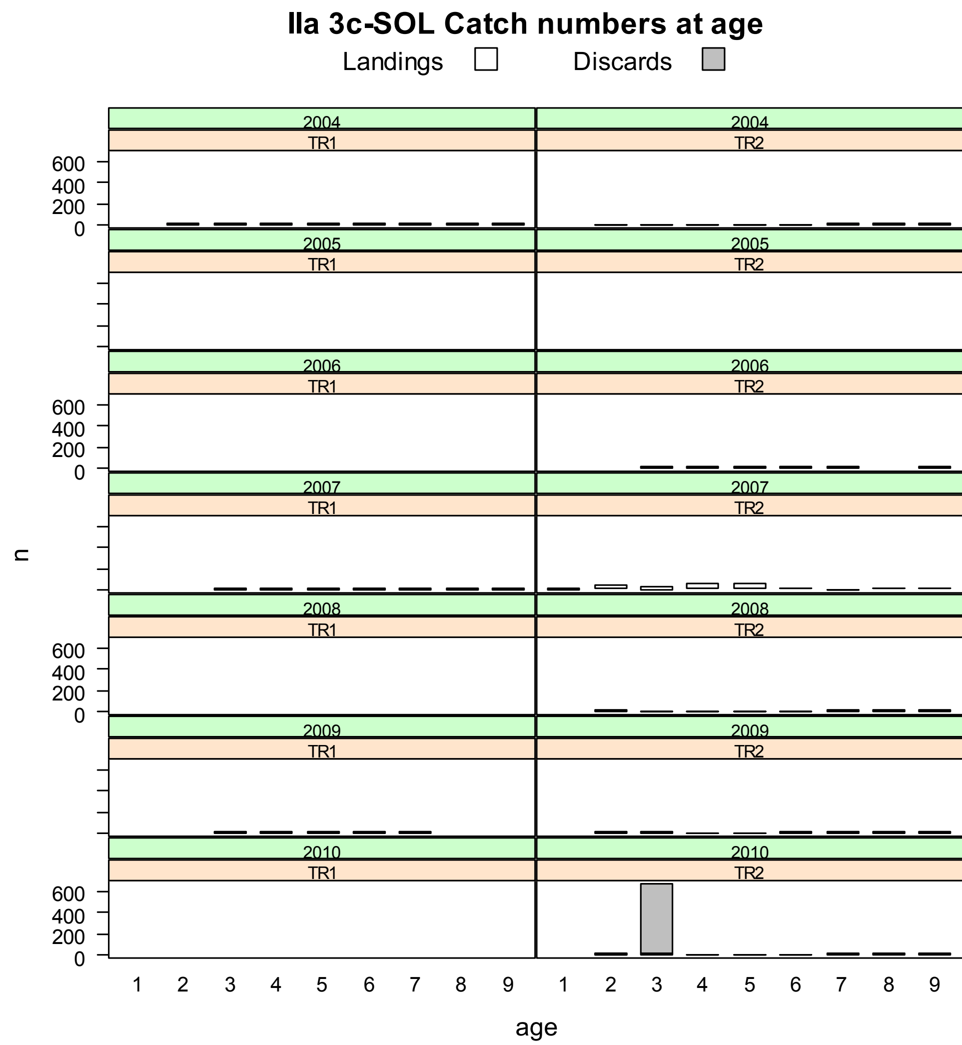


Figure 6.4.2.6 Irish Sea. Sole landings ('000) at ages 1-9 in TR1 and TR2 associated with Coun. Reg. 1342/2008, 2004-2010.

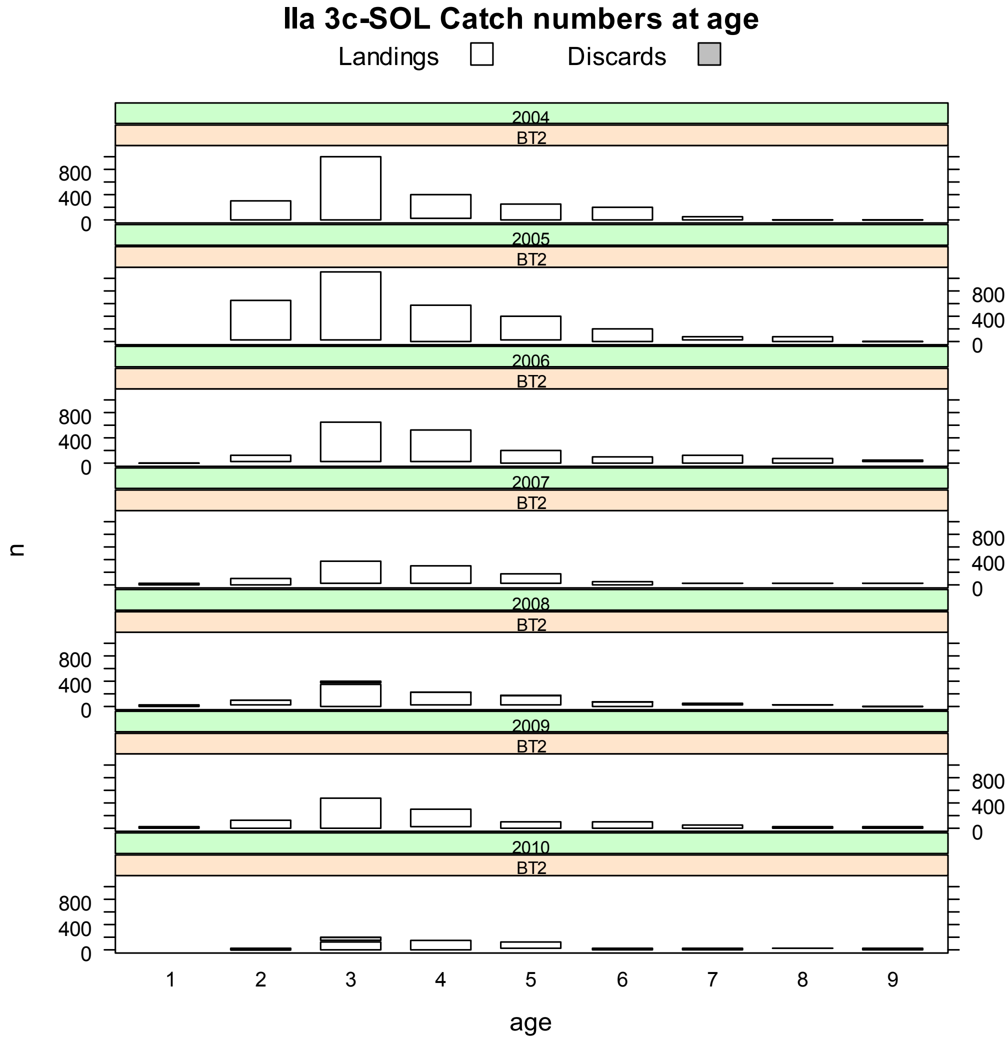


Figure 6.4.2.7 Irish Sea. Sole landings ('000) at ages 1-9 in BT2 associated with Coun. Reg. 1342/2008, 2004-2010.

6.4.3. Trend in CPUE of cod, sole and plaice

Only LPUE time series (landings per unit effort) are presented for cod, plaice and sole (Tables 6.4.3.1, 6.4.3.2, and 6.4.3.3), as discard data is not consistently available for all years or all categories distorting the trends in CPUE. Catch per unit effort may be available for some years/gears on request. The units used are grams per kW days-at-sea (g/kW*days). Gear groups with little effort, and static gears where the use of kW*days-at-sea as an appropriate indication of effort is debatable, may have unrepresentative values and are not discussed.

Cod LPUE values are highest within the GN1 category, which has seen a large decrease in LPUE in the last two years (Table 6.4.3.1 and Figure 6.4.3.1).

However, this category may have unrepresentative values given the effort uncertainty, which may also be the explanation for the large LL1 LPUE in 2008.

The most significant cod landings and effort occur within demersal trawl and seine categories TR1 and TR2, and effort is high in the beam trawl category BT2. TR1 has shown a steady annual increase in LPUE over the period until 2010 which saw large reduction in SPECON none, and a lesser reduction in SPECON CPart13. TR2, in which LPUE is lower, within SPECON none increased in the last two years, while CPart13 remained consistent.

Plaice shows a downward LPUE trend within the BT2 category which is one of the two dominant gears and has the highest LPUE values (Table 6.4.3.2 and Figure 6.4.3.1). Although TR2 contains far higher effort, TR1 and TR2 LPUEs are comparable with relatively stable values over the period, lower than those of the BT2 group.

Sole shows a relatively consistent LPUE across the period within BT2 which is the dominant gear and shows the larges LPUE values (Table 6.4.3.3 and Figure 6.4.3.1). A reduction in LPUE for this gear category occurred in 2010.

Table 6.4.3.1 Irish Sea. Cod LPUE (g/(kW*days)) by gear group according to Coun. Reg. 1342/2008 and year, 2003-2010. CPUE data is limited, but can be made available if requested.

ANNEX	SPECIES	REG AREA (	REG GEAR (	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	2008-2010
IIa	COD	3c	TR1	CPART13	0	0	0	0	0	0	713	527	624
IIa	COD	3c	TR1	none	178	263	302	394	598	767	912	402	735
IIa	COD	3c	TR2	CPART11	0	0	0	0	0	0	0	0	0
IIa	COD	3c	TR2	CPART13	0	0	0	0	0	0	29	27	28
IIa	COD	3c	TR2	none	86	80	74	65	83	62	104	139	78
IIa	COD	3c	BT2	none	86	62	66	46	70	32	24	45	34
IIa	COD	3c	GN1	none	1017	1614	1432	3441	6713	8662	3116	2243	5216
IIa	COD	3c	GT1	none	0	0	0		1524	418	248	2033	540
IIa	COD	3c	LL1	none	21	17	21	50	82	12133	0	0	3609

Table 6.4.3.2 Irish Sea. Plaice LPUE (g/(kW*days)) by gear group according to Coun. Reg. 1342/2008 and year, 2003-2010. CPUE data is limited, but can be made available if requested.

ANNEX	SPECIES	REG AREA (	REG GEAR (	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	2008-2010
IIa	PLE	3c	TR1	CPART13	0	0	0	0	0	0	20	29	24
IIa	PLE	3c	TR1	none	120	74	60	108	99	67	150	118	82
IIa	PLE	3c	TR2	CPART11	0	0	0	0	0	0	0	0	0
IIa	PLE	3c	TR2	CPART13	0	0	0	0	0	0	35	33	34
IIa	PLE	3c	TR2	none	53	74	81	71	74	52	52	43	51
IIa	PLE	3c	TR3	none				0	0	0	0	0	0
IIa	PLE	3c	BT2	none	289	277	290	244	171	192	262	194	214
IIa	PLE	3c	GN1	none	0	0	52	0	0	0	0	0	0
IIa	PLE	3c	GT1	none	0	0	0		0	0	0	0	0

Table 6.4.3.3 Irish Sea. Sole LPUE (g/(kW*days)) by gear group according to Coun. Reg. 1342/2008 and year, 2003-2010. CPUE data is limited, but can be made available if requested.

ANNEX	SPECIES	REG AREA (	REG GEAR (	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	2008-2010
IIa	SOL	3c	TR1	CPART13	0	0	0	0	0	0	0	0	0
IIa	SOL	3c	TR1	none	5	5	4	1	4	2	12	10	4
IIa	SOL	3c	TR2	CPART11	0	0	0	0	0	0	0	0	0
IIa	SOL	3c	TR2	CPART13	0	0	0	0	0	0	4	2	3
IIa	SOL	3c	TR2	none	7	6	7	9	15	7	19	17	10
IIa	SOL	3c	BT2	none	328	328	337	304	260	290	362	277	307
IIa	SOL	3c	GN1	none	0	0	0	0	0	0	0	0	0
IIa	SOL	3c	GT1	none	0	0	0		0	0	0	0	0

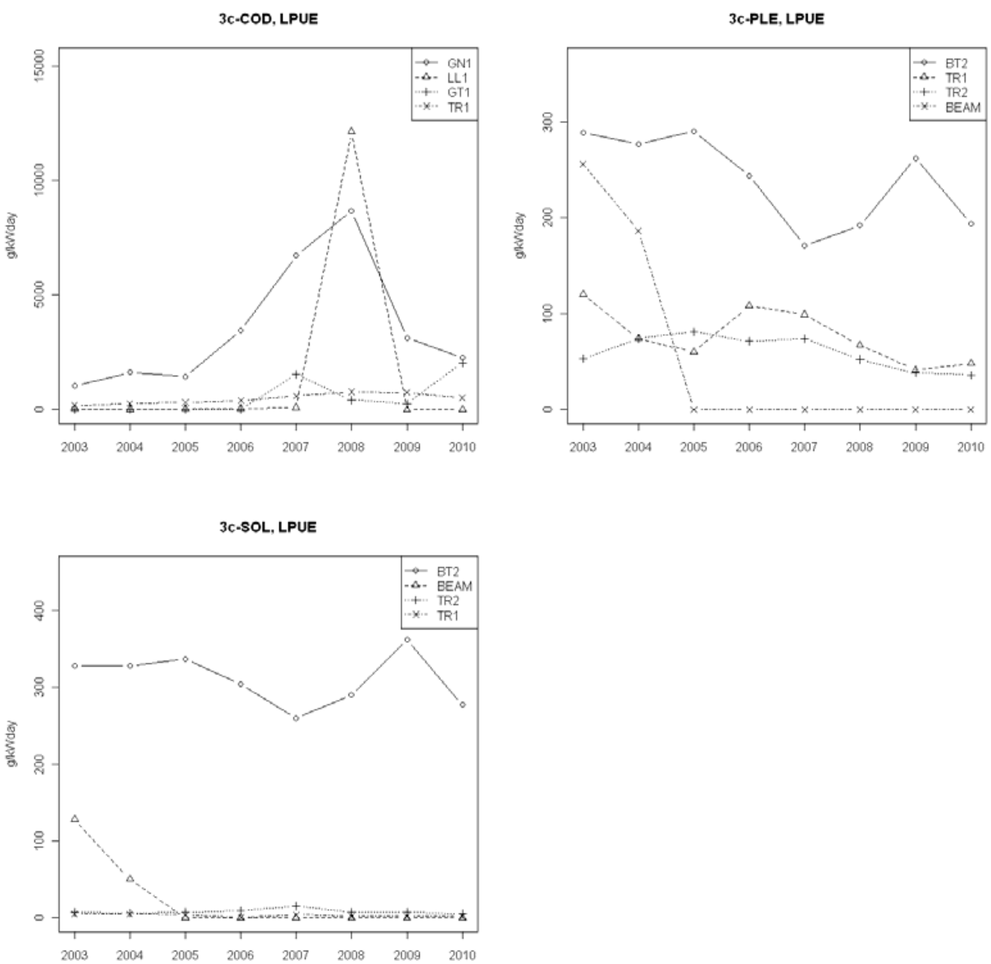


Figure 6.4.3.1. Irish Sea. Trends in cod, plaice, and sole LPUE (g/kW*days) by gear groups associated with Coun. Reg. 1342/2008, 2003-2010.

6.4.4. Ranking according to cod, sole and plaice catches

A decision at the September meeting was to again use ranked landings (Table 6.4.4.1) in weight for cod, plaice and sole. Catch rankings have not been presented as discard data are not consistently available for all years or all categories introducing bias into the ranking. Information on ranked catches is available on request and were provided in the preliminary output reviewed at the STECF summer plenary (PLEN 11-02) – Note that ranking on the basis of landings produces a slightly different result.

Cod: Ranking of cod landings in 2010 show TR1 to land the greatest proportion (42%) as has been the case over the majority of the presented period. The recent average (2008-2010) is slightly higher at 46%. TR2 contributes the second largest proportion, averaging 30% over the last three years. Gillnets (GN1) account for an average of 20% although annual proportions are variable.

The cod landings rankings provided in the Table 6.4.4.1 are the same as those provided to the STECF summer plenary (PLEN 11-02).

Plaice: Two gears dominate plaice landings, BT2 and TR2. BT2 ranks first in the majority of years accounting for around 50% or more. However, in 2007 and 2008 TR2 ranked first with over 50%. The average (2008-2010) proportions of plaice within these two gears are very similar (BT2: 48%; TR2: 45%).

Sole: BT2 has continually dominated sole landings, generally accounting for over 90%, and reflected in the average proportions. As with plaice, in 2007 and 2008 this percentage fell, accounting for between 80% and 90%. In these years, the contribution of TR2 increased. This change did not affect the overall ranking or the average ranking.

Table 6.4.4.1 Irish Sea. Ranked derogations according to relative cod, plaice and sole landings in weight (t), 2003-2010. Ranking is according to the year 2010.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Average 2008-2010
IIa	3c	COD	TR1	0.42792	0.41128	0.3904	0.44338	0.28226	0.3855	0.56366	0.42207	0.46
IIa	3c	COD	TR2	0.31396	0.36414	0.38727	0.33013	0.35304	0.25535	0.28571	0.36778	0.30
IIa	3c	COD	GN1	0.07019	0.10813	0.05741	0.13996	0.27394	0.3229	0.12112	0.1366	0.19
IIa	3c	COD	BT2	0.18717	0.11553	0.16284	0.08333	0.08909	0.02554	0.02795	0.07005	0.04
IIa	3c	COD	GT1					0.00083	0.00082	0.00155	0.0035	0.00
IIa	3c	COD	LL1	0.00075	0.00092	0.00209	0.00321	0.00083	0.00988			0.01
IIa	3c	PLE	BT2	0.56735	0.53059	0.58588	0.48191	0.37644	0.37681	0.53671	0.5132	0.48
IIa	3c	PLE	TR2	0.17347	0.3499	0.34779	0.3874	0.54167	0.53416	0.41013	0.41935	0.45
IIa	3c	PLE	TR1	0.25918	0.1195	0.06463	0.13069	0.0819	0.08903	0.05316	0.06745	0.07
IIa	3c	PLE	GN1	0	0	0.0017	0	0	0	0	0	0.00
IIa	3c	PLE	GT1					0	0	0	0	0.00
IIa	3c	PLE	TR3				0		0			0.00
IIa	3c	SOL	BT2	0.94689	0.94684	0.95018	0.91979	0.83507	0.87859	0.90654	0.91176	0.90
IIa	3c	SOL	TR2	0.03607	0.0431	0.0427	0.07487	0.15866	0.11821	0.08723	0.08088	0.10
IIa	3c	SOL	TR1	0.01703	0.01006	0.00712	0.00535	0.00626	0.00319	0.00623	0.00735	0.01
IIa	3c	SOL	GN1	0	0	0	0	0	0	0	0	0.00
IIa	3c	SOL	GT1					0		0		0.00

6.4.5. Unregulated gear

Category ‘none none’ represents gear types and mesh sizes not regulated by Coun. Reg. 1342/2008. This section provides a breakdown of the main gears within this category in effort (kW*Days at sea), and cod, plaice and sole catches. A large proportion of the ‘none none’ group prior to 2003 was due to Irish effort reported without mesh size information.

Effort within the unregulated category has increased by 20% since 2004 (Table 6.4.5.1), accounting for 19% to 34% of over 10m vessels effort within the Irish Sea. The increase in recent years results from an increase in dredge and pot activity (Figure 6.4.5.1). Low levels of effort also occur within the pelagic and beam trawl categories.

Landings of cod (Table 6.4.5.2), plaice (Table 6.4.5.3) and sole (Table 6.4.5.4) by unregulated gears within the Irish Sea have been minimal since 2005 (<5t per year). Further more, unregulated gears show no consistency in landings of cod, plaice or sole.

Table 6.4.5.1. Irish Sea trends in unregulated effort (kW*days at sea), according to Annex 1 of Con. Reg. 1342/2008, by major gear type, 2000-2010.

REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BEAM	ENG	13534	17018	7906	7360	1966	25324	8221	8992	26350	9124	1788
BEAM	IRL	792416	652385	772223	23853	159015						
BEAM	NIR									3639	370	
DEM_SEINE	ENG							142				
DEM_SEINE	IRL	23180	27798	26993		759						
DREDGE	BEL									53686		41044
DREDGE	ENG	266534	289651	276745	225232	197412	196296	313285	239832	267755	213853	254895
DREDGE	FRA											251
DREDGE	GBJ	47760		8192	2968							
DREDGE	IOM	11127	7319	7378	8573	5387	5194	9987	13983	17732	32458	51603
DREDGE	IRL	327890	266554	275994	363880	342029	170130	148109	222215	174216	191075	338229
DREDGE	NED							525	4725	54075	17118	
DREDGE	NIR	153565	212033	120708	135202	137511	111692	99662	118382	145810	114896	134209
DREDGE	SCO	654669	856495	802542	894237	724139	777598	572146	905327	1226238	1276319	928322
none	FRA								906			
none	IRL		709							96		
none	SCO						2130					
OTTER	BEL		6808		528							
OTTER	ENG	246		342	62	76	1416	112	820			
OTTER	IRL	1988191	1768311	1767545	24648	99895	4109	3940			455	4760
OTTER	NED	3960		4412								
OTTER	NIR				696		179	4022			570	3120
OTTER	SCO				5792	966		414				828
PEL_SEINE	FRA				1694							
PEL_SEINE	IRL				560	5872						
PEL_SEINE	NIR	20940	22729	29223	45458	22042	61552	34310		1131		
PEL_TRAWL	ENG			23040	12729		7200					13440
PEL_TRAWL	FRA											792
PEL_TRAWL	IRL	112207	107654	31338	48375	139711	127644	58579	24970	13968	5569	79906
PEL_TRAWL	NED		7428			14520	12797					3960
PEL_TRAWL	NIR	54243	35078	57566	87890	65982	49486	93380	140424	104430	92084	108198
PEL_TRAWL	SCO		95622	1033			14700					
POTS	ENG	69866	111192	276786	403052	346751	366190	368671	341096	214599	220336	207904
POTS	FRA									2844	2844	137
POTS	GBG									397	11116	1119
POTS	GBJ	65272	33456	64644	71212	76378	17726	11996	35952	53928	78825	62274
POTS	IOM			186	1581	1395		328		30176		
POTS	IRL	28797	40841	38315	70717	75874	108311	135097	188973	206366	225442	536294
POTS	NIR	67980	62919	30468	34180	31093	26230	43426	42170	97635	117418	90002
POTS	SCO	49070	51694	2047	1565		12627	31257	35190	34284	95311	84485
Grand Total		4751447	4673694	4625626	2472044	2448773	2098531	1937609	2323957	2729355	2705183	2947560

Table. 6.4.5.2. Irish Sea. Unregulated gear (category none) associated with Coun. Reg. 1342/2008 cod landing composition by gear type, 2004-2010.

SPECIES	REG_GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
COD	DREDGE	1	0	0	0	0		0	0								0	0				
COD	BEAM	8	0	0										0	0							
COD	OTTER	9	4	0.31				0	0								0	0				
COD	PEL_SEINE	1	0	0																		
COD	PEL_TRAWL	5	0	0				1	0	0	3	0	0	0	0		1	0	0	1	0	0
COD	POTS	4	20	0.83	0	0		0	0		0	0		0	0		0	0		0	0	
COD Total		28	24	0.46	0	0		1	0	0	3	0	0	0	0		1	0	0	1	0	0

Table. 6.4.5.3. Irish Sea. Unregulated gear (category none) associated with Coun. Reg. 1342/2008 plaice landing composition by gear type, 2004-2010.

SPECIES	REG_GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
PLE	none													0	0							
PLE	DEM_SEINE	0	0																			
PLE	DREDGE	4	0	0	3	0	0	1	0	0	0	0		0	0		0	0		0	0	
PLE	BEAM	30	0	0																		
PLE	OTTER	5	11	0.69	1	0	0	0	0		0	0					0	0				
PLE	PEL_SEINE	0	0																			
PLE	PEL_TRAWL	9	0	0				0	0		1	0	0	2	0	0	0	0				
PLE	POTS	1	65	0.98	0	0								0	0		0	0				
PLE Total		49	76	0.61	4	0	0	1	0	0	1	0	0	2	0	0	0	0		0	0	

Table. 6.4.5.4. Irish Sea. Unregulated gear (category none) associated with Coun. Reg. 1342/2008 sole landing composition by gear type, 2004-2010.

SPECIES	REG_GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
SOL	none													0	0							
SOL	DREDGE	2	0	0	4	0	0	2	0	0	4	0	0	0	0		0	0		0	0	
SOL	BEAM	8	0	0																		
SOL	OTTER	0	0		0	0		0	0		0	0					0	0		0	0	
SOL	PEL_TRAWL	0	0					0	0		0	0		1	0	0	0	0				
SOL	POTS										0	0		0	0		0	0		0	0	
SOL Total		10	0	0	4	0	0	2	0	0	4	0	0	1	0	0	0	0		0	0	

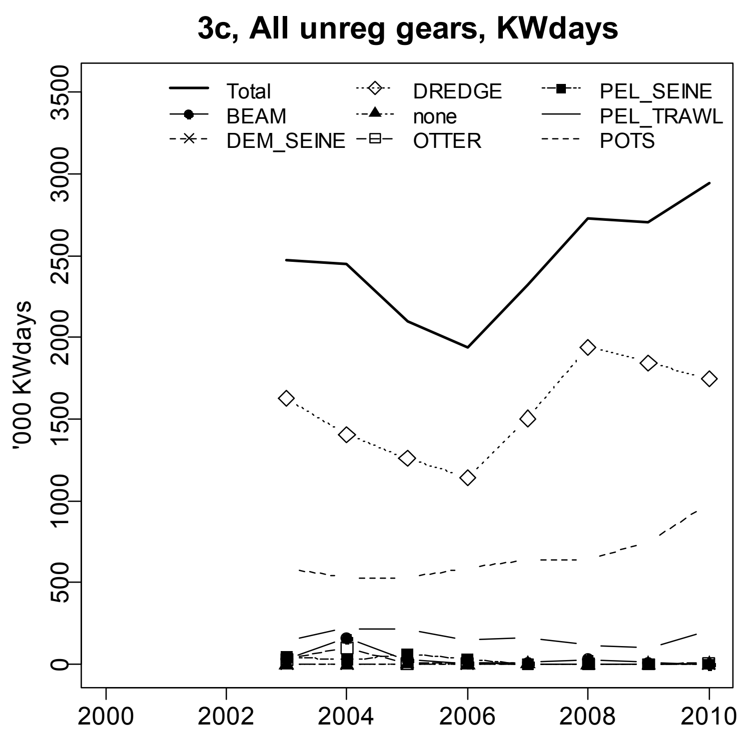


Figure 6.4.5.1. Irish Sea. Effort composition in kW*Days at sea for unregulated gears according to Coun. Reg. 1342/2008 (category none), 2000-2010.

6.4.6. Vessels <10m in Irish Sea

It should be noted that under 10m vessels are not required to report effort levels in the same way as larger vessels. As such not all nations operating within the Irish Sea have been able to provide this information. Presented is information from England (including Northern Ireland) and Scotland. The methodology for production of this data may vary between nations. For details, refer to the national data descriptions in Section 5.2.2 and Table 5.2.2.2.

The majority of effort by the under 10m vessels reported here is directed at pots and traps. The effort levels increased greatly in 2006 due to the introduction of buyers and sellers notes into the UK who have used these to estimate effort. Since 2008 effort has shown a marked decline. At a far lower level, TR2 gear is also utilised within the Irish Sea which shows a reduction in 2010.

Table 6.4.6.2 provides landings data for vessels under 10m, including data from Ireland, England (including Northern Ireland), and Scotland, for the main species. Irish under 10 meter vessel landings are not recorded by gear type, therefore falling into the “none” category. The under 10m vessels in the Irish Sea land edible crab in the greatest quantity, previously over 1,000t per year. This was far lower in 2009 and 2010 (~ 400t and ~800t respectively). Scallops, *Nephrops* and spider crabs dominate the remainder of landings reported to the group. Comparatively small quantities of plaice averaging ~70t and variable cod landings (6-96t) have been reported. Only minimal sole landings occur. Where gear type is available, landings primarily originate from pots, TR2, and dredges, Irish under 10m vessels are likely to employ a similar gear distribution.

Overall, the contribution of the under 10m vessel segment to overall demersal species landings is small. *Nephrops* landings are less than 5% of the total Irish Sea *Nephrops* landings (93-98% of which are from regulated gears).

Of all Irish Sea cod landings, 89-99% stem from regulated gears, the remainder originate primarily from under 10m vessels. In recent years, <1% of landings come from unregulated ≥10m vessels.

Plaice landings primarily originate from regulated gears 87-95%, while the majority of the remaining landings are from under 10m vessels. Little to no plaice landings occur within the unregulated category, <1% since 2005.

Regulated gears capture 98-99% of all sole landings from the Irish Sea (including ≥ and <10m vessels). The origin of remaining landings varies annually between the under 10m vessels and unregulated ≥10m vessels.

Table 6.4.6.1. Irish Sea trends in nominal effort (kW*days at sea) of under 10m vessels by gear groups of Annex I, Coun. Reg. 1342/2008 and unregulated gears, 2000-2010. National data qualities are summarised in Section 5.2.

REG GEAR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
TR1	7970	13615	17628	14260	2043	2747	1624	3313	6692	4523	2837
TR2	158716	173141	138478	167801	221123	240943	209409	234762	276763	284805	163444
BT2	1120	6240	2424	1718	2354	9504	10855	2888	1942	627	623
GN1	14176	13581	16521	13223	14377	10944	10940	34179	45371	34397	25422
GT1							78	22	424	9	330
LL1						3213	10348	6469	3656	4347	4554
none	23	23		23	30	30	37	455	437	6	
BEAM	11390	112		414	11750	327	2603	8877	6010	3142	7029
DEM_SEINE										662	
DREDGE	45045	40805	19222	18631	18749	11709	45984	61441	165152	110014	114208
OTTER	213	246	316	119			311	295	75		637
PEL_SEINE									142		
POTS	232901	162788	167241	237901	294195	296227	1079422	1130565	1024692	658136	547656
Grand Total	471554	410551	361830	454090	564621	575644	1371611	1483266	1531356	1100668	866740

Table 6.4.6.2. Landings of under 10m vessels by species and gear, 2004-2010.

SPECIES	REG_GEAR	2003 L	2003 D	2003 R	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
ANF	DREDGE																0	0		1	0	0	0	0	
ANF	none				17	0	0							0	0					8	0	0	8	0	0
ANF	TR2	2	0	0	4	0	0	3	0	0	6	0	0	2	0	0	4	0	0	4	0	0	1	0	0
COD	GN1	0	0		0	0		2	0	0	2	0	0	1	0	0	1	0	0	0	0		0	0	
COD	none	92	0	0	62	0	0							4	0	0	1	0	0	75	0	0	28	0	0
COD	TR1	1	0	0				0	0		0	0		0	0		0	0		0	0		0	0	
COD	TR2	3	0	0	5	0	0	4	0	0	6	0	0	6	0	0	5	0	0	4	0	0	0	0	
COE	none	0	0		1	0	0										0	0							
CRE	DREDGE																0	0		1	0	0	0	0	
CRE	GN1				0	0		0	0		0	0		14	0	0	8	0	0	5	0	0	1	0	0
CRE	GT1																1	0	0						
CRE	none	875	0	0	1029	0	0	1107	0	0	70	0	0	293	0	0	262	0	0	251	0	0	684	0	0
CRE	POTS	348	0	0	175	0	0	166	0	0	988	0	0	1233	0	0	806	0	0	120	0	0	115	0	0
CRE	TR2	2	0	0	0	0		0	0		0	0		0	0		0	0		11	0	0	0	0	
HAD	none	15	0	0	63	0	0							0	0		0	0		0	0		0	0	
HAD	TR2	1	0	0	1	0	0	0	0		2	0	0	2	0	0	2	1	0.33	2	0	0	1	10	0.91
HKE	none	36	0	0	24	0	0										0	0					1	0	0
HKE	TR2	0	0		1	0	0	0	0		1	0	0	0	0		1	0	0	0	0		0	0	
MAC	LL1										5	0	0	5	0	0	3	0	0	0	0		0	0	
MAC	none	80	0	0	81	0	0				74	0	0							62	0	0	48	0	0
MAC	POTS										3	0	0	11	0	0	5	0	0	0	0		0	0	
MAC	TR2										0	1	1	0	0		0	0		0	0				
NEP	GN1													0	0					2	0	0			
NEP	none				18	0	0							1	0	0				1	0	0	2	0	0
NEP	POTS	1	0	0	1	0	0	4	0	0	13	0	0	13	0	0	14	0	0	104	0	0	2	0	0
NEP	TR2	120	0	0	222	0	0	249	0	0	414	0	0	290	0	0	399	0	0	367	0	0	316	0	0
PLE	BEAM							1	0	0	0	0		0	0		0	0		0	0		0	0	
PLE	BT2	0	0		0	0		14	0	0	16	0	0	3	0	0	2	0	0						
PLE	GN1	0	0		2	0	0	3	0	0	1	0	0	6	0	0	2	0	0	2	0	0	3	0	0
PLE	none	8	0	0	11	0	0							0	0		0	0		0	0		0	0	
PLE	TR1	9	0	0	5	0	0	2	0	0	1	0	0	3	0	0	5	0	0	3	0	0	4	0	0
PLE	TR2	40	0	0	34	0	0	70	0	0	57	0	0	93	0	0	64	0	0	53	0	0	26	2	0.07
POK	none	12	0	0	16	0	0							0	0		0	0		0	0				
RAJ	none	51	0	0	35	0	0							2	0	0	28	0	0	13	0	0	19	0	0
RJY	none																			1	0	0			
SCE	DREDGE	49	0	0	27	0	0	21	0	0	59	0	0	115	0	0	586	0	0	554	0	0	602	0	0
SCE	GN1																			1	0	0			
SCE	none	0	0		0	0											36	0	0	3	0	0	2	0	0
SCE	POTS													2	0	0	3	0	0	2	0	0	0	0	
SCE	TR2										0	0		0	0		0	0		6	0	0	2	0	0
SCR	DREDGE										5	0	0	0	0		1	0	0	0	0				
SCR	GN1										2	0	0	6	0	0	38	0	0	14	0	0	7	0	0
SCR	none	51	0	0	55	0	0	20	0	0										119	0	0	179	0	0
SCR	POTS	114	0	0							61	0	0	83	0	0	82	0	0	73	0	0	77	0	0
SOL	BT2	1	0	0	1	0	0	8	0	0	9	0	0	1	0	0	1	0	0						
SOL	GN1	0	0		0	0		0	0		0	0		1	0	0	1	0	0	0	0		1	0	0
SOL	none	5	0	0	2	0	0							0	0					0	0				
SOL	TR2	2	0	0	2	0	0	1	0	0	2	0	0	4	0	0	4	0	0	2	0	0	1	0	0
WHG	BT2				0	0		0	1	1	0	1	1												
WHG	none	11	0	0	15	0	0										0	0		0	0				
WHG	TR2	2	0	0	0	3	1	0	0		0	0		0	1	1	3	387	0.99	9	0	0	0	14	1
Grand Total		1931	0	0	1909	3	0	1675	1	0	1797	2	0	2194	1	0	2368	388	0.14	1873	0	0	2130	26	0.01

6.4.7. Spatial distribution patterns of effective fishing effort of trawled gears

Spatial figures of effort for the Irish Sea concentrate on those categories identified as significant in recorded effort, and/or cod, plaice and sole catches. Figures use a common scale across years for a given gear group, but scales are unique to each category such that the colours assigned to statistical rectangles for gear group TR1 can not be compared directly to those assigned for TR2 say.

TR1: Effort has declined across the period presented. The focus is currently on the Irish Sea – west of Scotland border, previously a second focus area occurred in the western Irish Sea (Figure 6.4.7.1).

TR2: Clearly defined areas coinciding with areas of mud occur with this gear. There has been some contraction over the period (Figure 6.4.7.2). Overall effort has declined.

BT2: This gear has shown a marked contraction in fishing areas and effort reduction within the Irish Sea (Figure 6.4.7.3). The southern most area is no longer an area of focused effort.

GN1: Gillnet effort distribution has been changeable, although effort appears to focus along the eastern area (Figure 6.4.7.4). Effort shows some increase in effort until 2008, declining again in the most recent years.

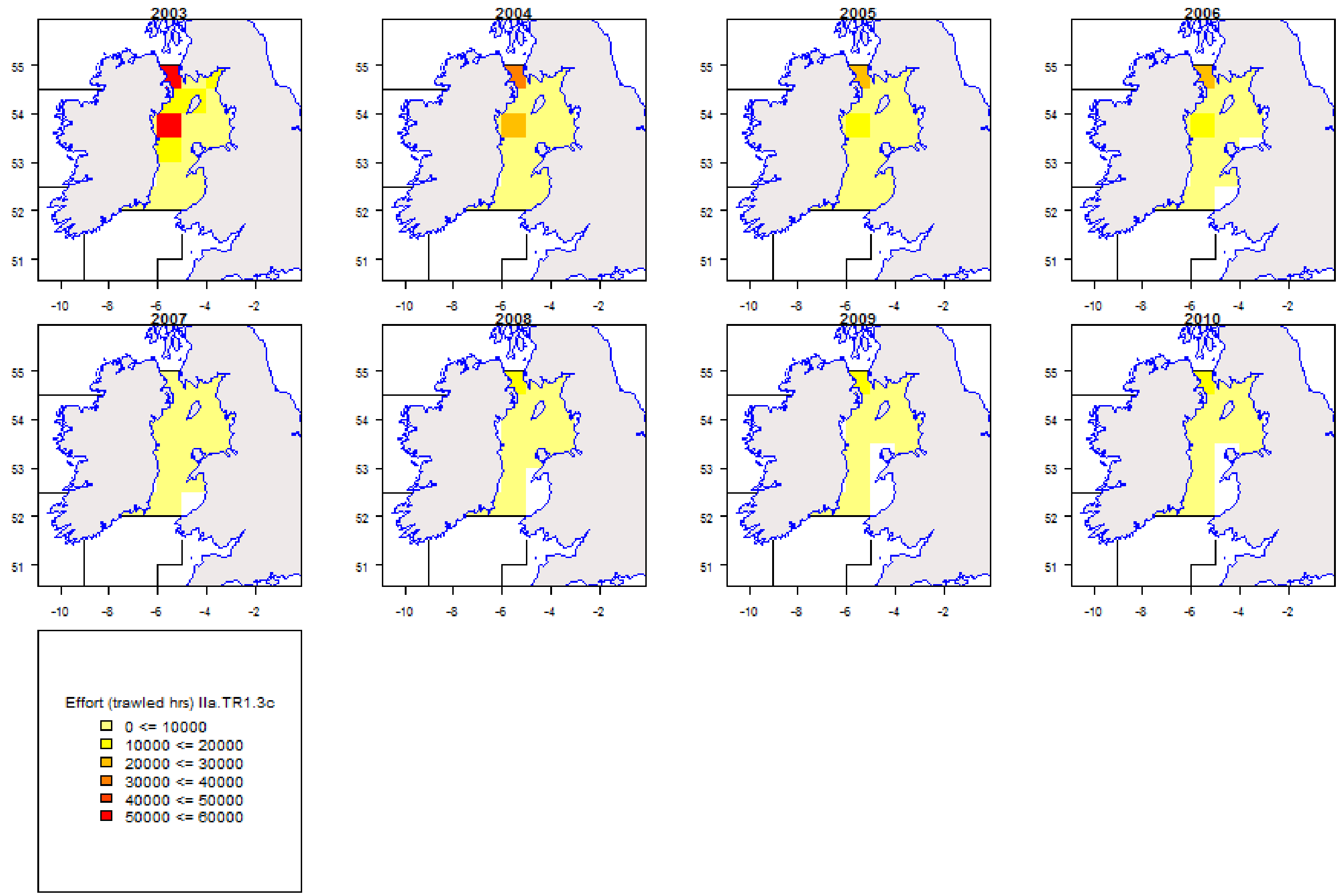


Figure 6.4.7.1. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for TR1, 2003-2010.

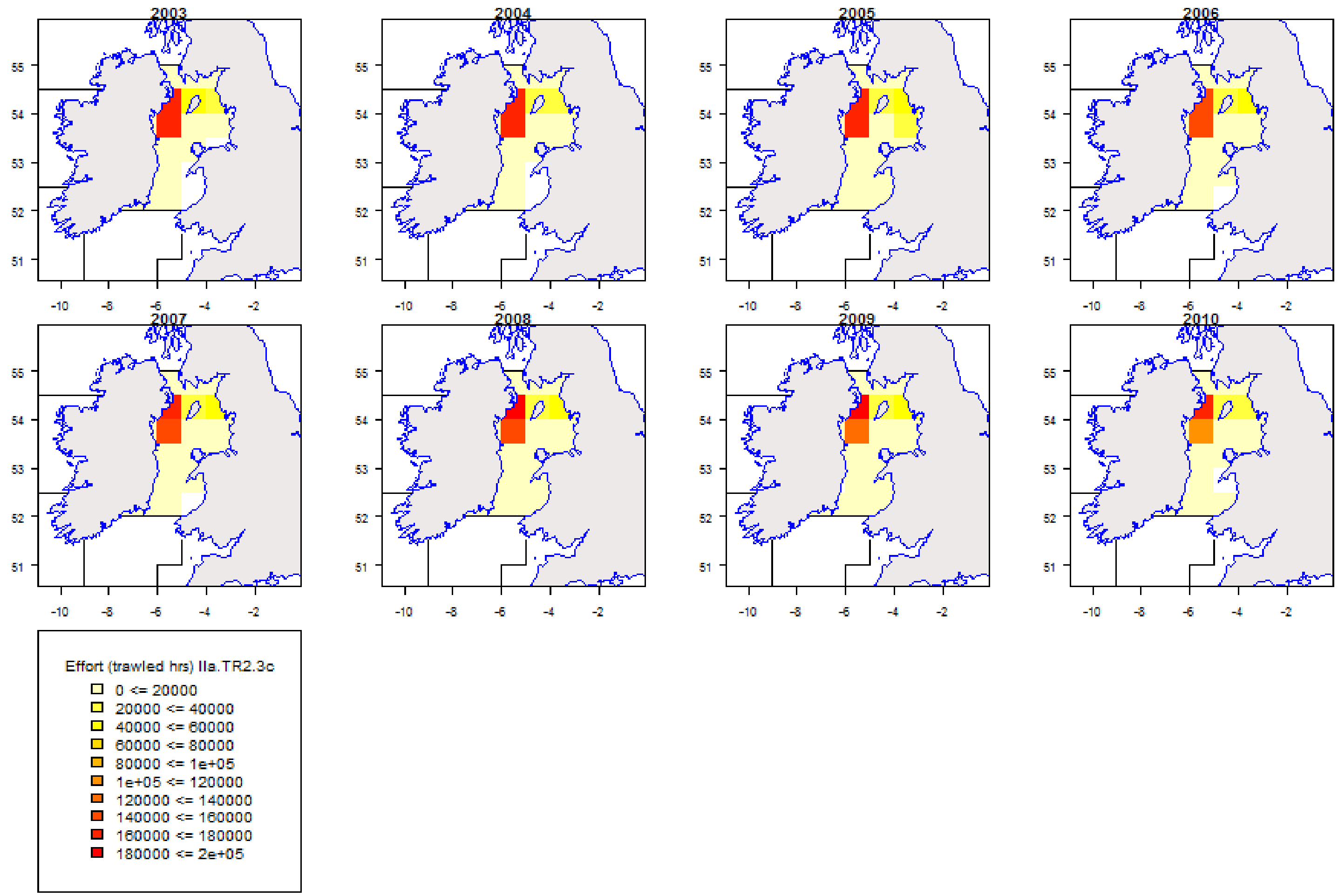


Figure 6.4.7.2. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for TR2, 2003-2010.

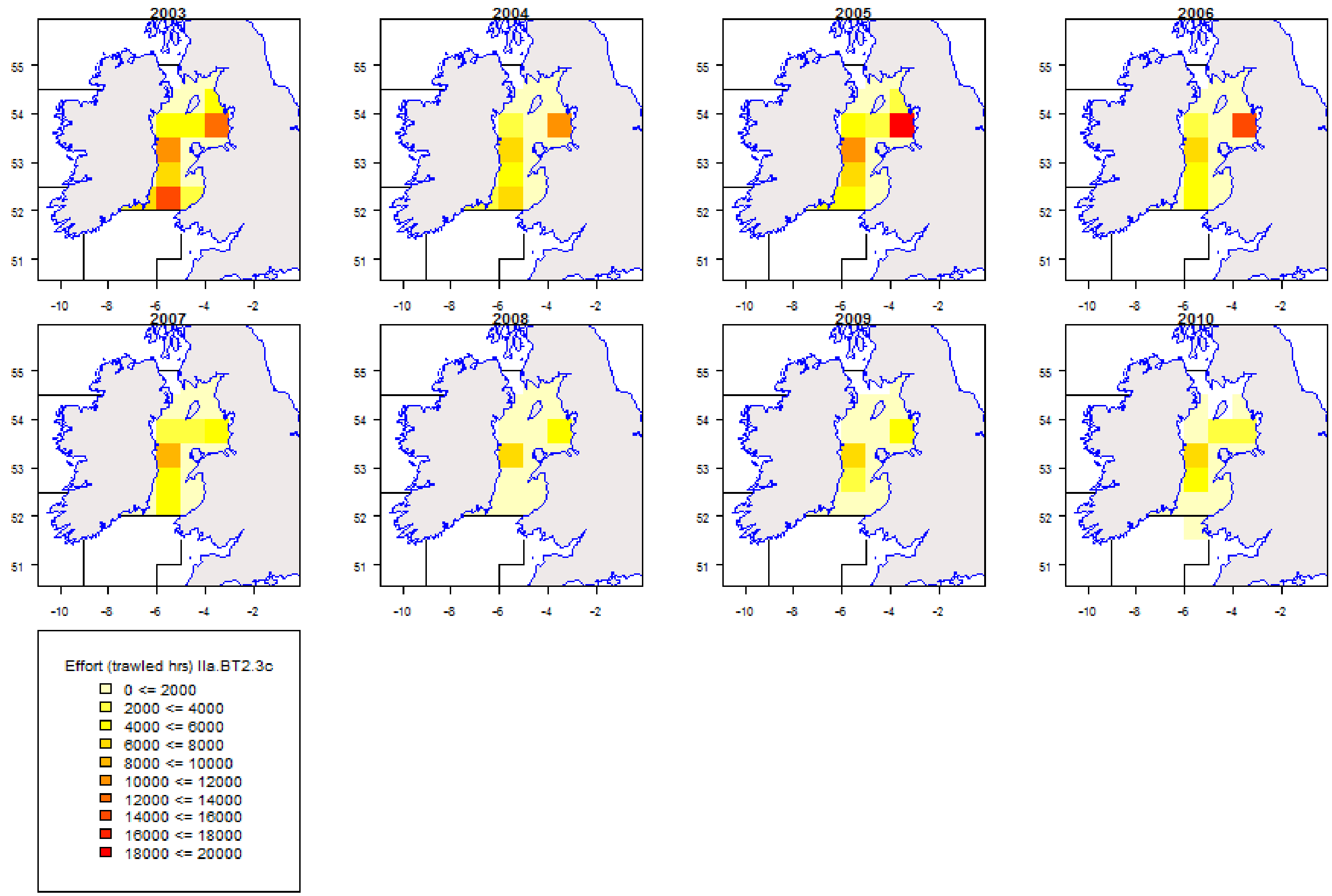


Figure 6.4.7.3. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for BT2, 2003-2010.

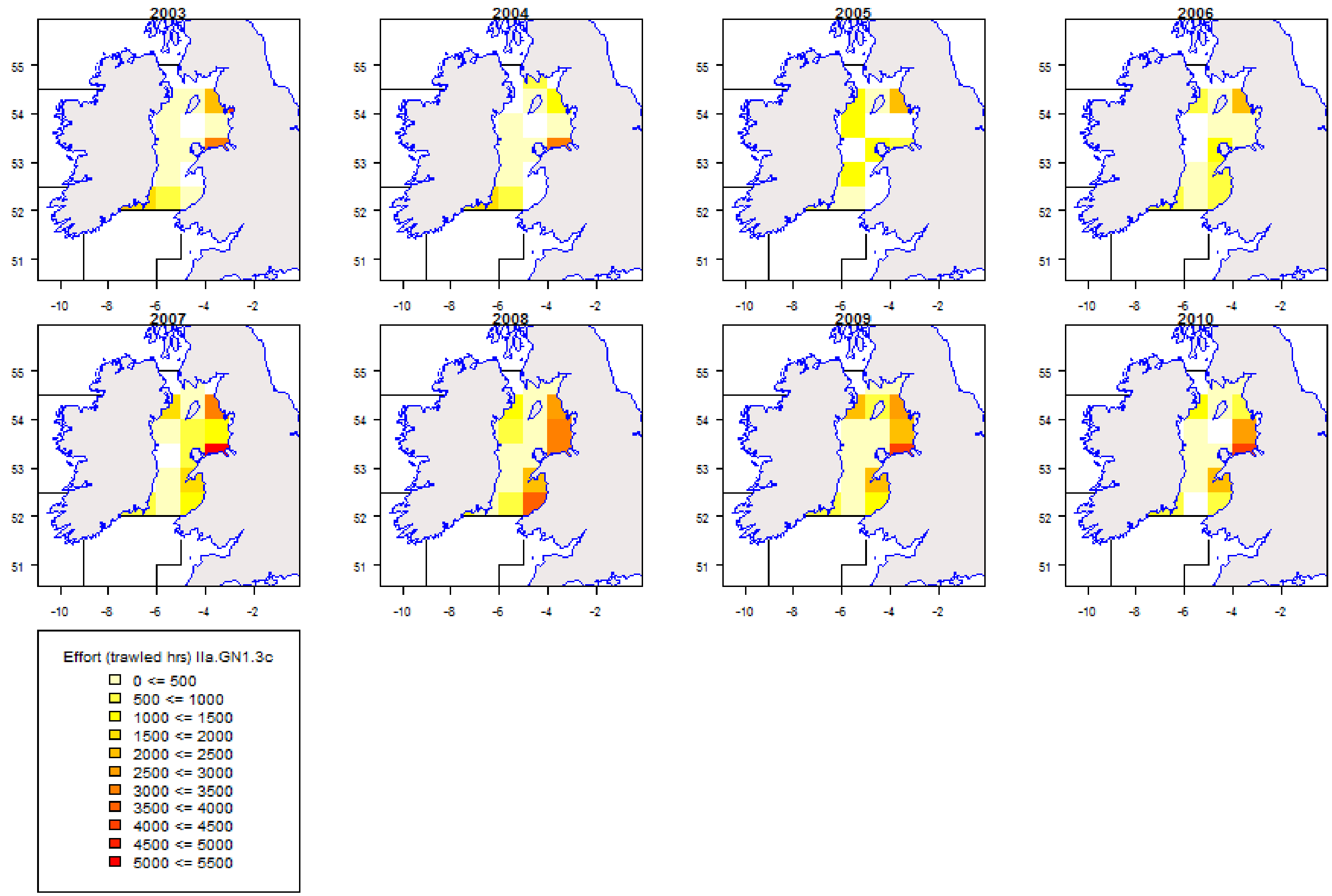


Figure 6.4.7.4. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for GN1, 2003-2010.

6.5. Management area 3d: West of Scotland

6.5.1. Trend in effort by derogation in management area 3d: West of Scotland

Data quality: Irish vessels contribute to the effort total in management area 3d. According to the international data supplied this constitutes approximately 9-13% of overall effort in the region depending on year (see Table 6.5.1.1). Irish data was not disaggregated by mesh size before 2003. Spain has been allocated 2,460,000 kW*days for demersal fishing in ICES sub areas V and VI under the Western Waters regulation (Coun. Reg. (EC) 1415/2004). As no data has been supplied by Spain in relation to Annex IIA it is not possible to know whether any activity was conducted in Division VIa. There are known problems with French data submitted for 2002 in other management areas. There is not an obvious problem with respect to area 3d but given no recording of mesh size from Irish data before 2003 and to be consistent with reporting of other management areas effort trends are considered from 2003 only.

Table 6.5.1.2 shows the percentage change in effort totals supplied by member states compared to data submitted in 2010 (and as available on the STECF website). There are no revisions to data submissions for any years (2000 to 2009).

According to the data provided by Member States in 2011 aggregated by categories in Coun. Reg. (EC) 1342/2008 (cod plan) the fishery West of Scotland is primarily an otter trawl fishery; beam trawls and static gears are hardly used. When Spanish data was made available in 2009, longline gears were clearly the second most important gear category, however Spanish data is not available for division VIa this year.

In terms of kWdays the overall nominal effort in ICES division VIa displays a decrease of 40% since 2003. The majority of that reduction took place between 2003 and 2005. Effort within regulated gears is 42% less in 2010 compared to 2003. Effort by trawl and seine gears (TR gears under Coun. Reg. (EC) 1342/2008) shows a long term decrease in effort and has fallen to its lowest level in the time series in 2010 (Table 6.5.1.3 and Figure 6.5.1.1). Recorded effort in 2010 was 44% lower than that in 2003 and 10% lower than in 2009. Without Spanish data the trend in long line (LL1) effort is uncertain but it is still the most important gear type after TR gears in this area.

Within the trawl gear categories it can be seen from Figure 6.5.1.2 that effort is only significant in the categories TR1 and TR2. No effort was recorded for the TR3 gear in 2010 (Table 6.5.1.3). There is a clear contrast in effort trend between these two categories; effort using TR1 gears declined markedly between 2003 and 2005, then was relatively stable from 2006 to 2009 (although it has fallen in 2010). Effort for TR2 gears fell more slowly between 2003 and 2005 and then stabilised, however between 2008 and 2010 effort in the TR2 category fell by 22%.

Two years of data are now available regarding TR effort under articles 11 and 13 of Coun. Reg. (EC) 1342/2008. Figure 6.5.1.3 shows a sharp decline in TR1 'none' effort in 2009, but this was more than compensated for by effort now categorised under CPART13 leading to a small increase in overall TR1 effort. Effort under TR1, CPART13 increased again in 2010 but the fall in TR1 'none' effort between 2009 and 2010 was bigger such that overall TR1 effort is at a new low for the time series. Figure 6.5.1.4 shows a very large decline in TR2 'none' effort in 2009 which was bigger than the effort recorded for TR2, CPART13 in 2009. In 2010 approximately 1m kWdays was recorded under TR2, CPART11. Vessels transferred from CPART13 to CPART11. However, the reduction in effort in CPART13 was greater than the new effort recorded under CPART11 and effort without special condition also decreased further in 2010.

Effort which could not be assigned to any existing derogation (none) has fallen by 37% in 2010 compared to 2003 (Table 6.5.1.3). Effort not assigned to a regulated gear type comprises mesh size groups 32-54mm and 55-69mm targeting pelagic resources, effort where mesh size was not identified in the data provided and unregulated gear types such as pots and dredges. Unregulated gears are described in section 6.5.5 but Figure 6.5.1.5 illustrates the importance of unregulated gear effort within the area. Between 2004 and 2006 total effort recorded for unregulated gears exceeded that of regulated gears, although since 2007 the situation has reversed and unregulated effort is decreasing at a faster rate than regulated effort.

Tables showing effort in terms of gross tonnage days at sea (GT*days at sea) and number of vessels by derogation are not presented in this report but are available on the JRC website:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

It should be noted that to record an annual number of vessels the maximum number from any of the four quarters within the year is chosen. Because vessels are not necessarily assigned exclusively to a single derogation, some multiple counting may occur if summing across derogations.

Table 6.5.1.1 West of Scotland. Trend in nominal effort (kW*days at sea) by derogations existing in Appendix 1 of Annex IIA of Coun. Reg. 57/2011 and Member State, 2000-2010. Derogations are sorted by gear type and country.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IIa	3d	BT1	none	FRA	0	0	0	1519	15327	0	0	0	0	0	0
IIa	3d			SCO	4894	0	0	60296	151480	119958	81195	1803	0	0	0
IIa	3d	BT2	none	BEL	27240	10308	5595	19005	18103	8566	4415	2356	0	0	0
IIa	3d			ENG	2294	1550	861	1274	12067	1810	0	0	0	0	0
IIa	3d			FRA	0	1472	0	25827	34218	0	0	0	0	0	0
IIa	3d			GBJ	1857	0	0	0	0	0	0	0	0	0	0
IIa	3d			IRL	0	0	0	0	28827	5068	6335	0	0	0	0
IIa	3d			SCO	97861	84675	103897	0	0	0	0	0	0	0	0
IIa	3d	GN1	none	ENG	358510	414572	399429	471808	309423	201100	23028	36174	0	13832	2540
IIa	3d			FRA	103163	148158	770080	130216	169758	145478	129344	230271	572425	572425	294925
IIa	3d			GER	37830	37059	5292	113084	79545	26780	0	0	37334	29088	36132
IIa	3d			IRL	3734	19636	8258	19967	20763	192	3554	13346	9949	3275	793
IIa	3d			NIR	0	0	0	0	0	0	0	0	3564	0	0
IIa	3d			SCO	13446	14196	7097	47095	66913	38855	1044	553	6155	0	0
IIa	3d	GT1	none	FRA	564	156032	0	0	0	0	0	0	0	0	0
IIa	3d			IRL	0	0	0	0	0	5410	448	0	0	0	0
IIa	3d			SCO	2265	1416	0	636	435	0	0	0	0	0	0
IIa	3d	LL1	none	ENG	675637	671367	550463	370933	459841	317428	284497	325325	28103	0	0
IIa	3d			FRA	52948	0	0	0	0	0	163130	445344	277750	277750	189072
IIa	3d			IRL	3693	44550	9450	7200	18400	3000	0	9750	0	0	3272
IIa	3d			NIR	562	0	0	0	0	1574	0	0	0	0	0
IIa	3d			SCO	73802	88275	181600	124695	148430	306947	371404	518887	378736	703396	723065
IIa	3d	TR1	CPART11	SCO	0	0	0	0	0	0	0	0	0	0	44284
IIa	3d		CPART13	GER	0	0	0	0	0	0	0	0	0	0	4530
IIa	3d			IRL	0	0	0	0	0	0	0	0	0	549300	813886
IIa	3d			SCO	0	0	0	0	0	0	0	0	0	2228713	2315824
IIa	3d		none	ENG	727872	705017	363993	319445	145914	85851	48469	8711	17020	24446	14062
IIa	3d			FRA	7285816	7796882	28235453	6010785	5807538	6038254	5193815	5058616	4486887	4482329	3469228
IIa	3d			GER	66862	45127	23580	19191	12530	35586	27897	23652	3060	4854	2427
IIa	3d			IOM	5070	0	0	0	0	0	0	0	0	0	0
IIa	3d			IRL	0	0	0	496439	316477	308681	323881	530292	435213	0	0
IIa	3d			NIR	497801	367439	300806	338394	162967	87191	29352	33609	38338	45378	23860
IIa	3d			SCO	7453114	8522924	7565712	5722626	4502155	2635381	2099672	1986484	1990142	0	0
IIa	3d	TR2	CPART11	SCO	0	0	0	0	0	0	0	0	0	0	1054957
IIa	3d		CPART13	SCO	0	0	0	0	0	0	0	0	0	4524898	2731450
IIa	3d		none	BEL	0	0	0	0	0	0	1766	795	0	0	1176
IIa	3d			ENG	31896	12554	35937	106861	66311	57345	63616	58724	87267	15721	14802
IIa	3d			FRA	7206	10106	30278	43098	12350	0	0	883	269645	274203	0
IIa	3d			IOM	0	562	0	181	1172	181	894	0	649	0	0
IIa	3d			IRL	0	0	0	1039258	967585	767637	712740	384396	196957	17989	11876
IIa	3d			NIR	328049	354350	391238	280147	353158	350269	453556	758258	652352	523976	874396
IIa	3d			SCO	5065442	4903162	4796552	5760859	5335231	4586126	4380883	4692157	4804497	0	0
IIa	3d	TR3	none	DEN	46920	47565	130437	156828	91088	0	11520	0	0	0	0
IIa	3d			IRL	0	0	0	2198	0	342	160	317	11321	1323	0
IIa	3d			NIR	0	0	0	0	317	0	0	0	0	0	0
IIa	3d			SCO	14189	3775	1747	29877	6880	41202	0	256	0	0	0
Total of regulated gears					22990537	24462729	43917755	21719742	19315203	16176212	14416615	15120959	14307364	14292896	12626557
IIa	3d			DEN	151351	78011	28933	62183	264885	157518	556042	135713	93959		
IIa	3d			ENG	563129	739599	660116	763289	597101	529340	1101891	1187425	746498	870027	632396
IIa	3d			FRA	352507	243553	1342869	434384	453248	215280	361858	354281	275460	275460	233392
IIa	3d			GBJ			10252							321	
IIa	3d			GER	666036	759653	590791	729409	767344	720815	1066842	1057879	700908	490212	430923
IIa	3d			IOM	23922	2541	8344	8144	13229	2722	9133	11285	35882	15984	8010
IIa	3d			IRL	4123007	3604844	3995866	3181075	3460778	2392303	2058378	2008208	2016491	1715513	2162066
IIa	3d			LIT										29520	
IIa	3d			NED	3335277	4343285	3371770	2170705	6497392	5592136	4295071	4118663	3873076	2839787	1564318
IIa	3d			NIR	274378	305302	543148	454206	708614	496663	477614	584492	420274	284696	386760
IIa	3d			SCO	7067739	7523617	8562814	8904499	9410186	8208630	5548926	4992356	4676514	5194373	5040689
Total of unregulated gears					16557346	17600405	19114903	16707894	22172777	18315407	15475755	14450302	12839062	11715893	10458554
Grand total					39547883	42063134	63032658	38427636	41487980	34491619	29892370	29571261	27146426	26008789	23085111

Table 6.5.1.2 West of Scotland. Relative change in nominal effort (kW*days at sea) reported by Member State compared to the data submitted in 2010; by derogations existing in Appendix 1 of Annex IIA of Coun. Reg. 57/2011.

ANNEX	REG AREA	REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
IIa	3d	BT1	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT1	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT2	BEL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT2	ENG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT2	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT2	GBJ	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT2	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	BT2	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GN1	ENG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GN1	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GN1	GER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GN1	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GN1	NIR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GN1	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GT1	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GT1	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	GT1	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	LL1	ENG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	LL1	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	LL1	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	LL1	NIR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	LL1	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	ENG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	GER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	IOM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	NIR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR1	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	BEL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	ENG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	IOM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	NIR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR2	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR3	DEN	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR3	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR3	NIR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	TR3	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	DEN	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	ENG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	GBJ	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	GER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	IOM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	IRL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	NED	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	NIR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IIa	3d	none	SCO	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 6.5.1.3 West of Scotland. Trend in nominal effort (kW*days at sea) by derogation as defined by Coun. Reg. 57/2011, 2003-2010.

REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	Rel. chng. 03	Rel. chng. 04-06	Rel. chng. 09
3d	BT1	none	61815	166807	119958	81195	1803	0	0	0	-100%	-100%	NA
3d	BT2	none	46106	93215	15444	10750	2356	0	0	0	-100%	-100%	NA
3d	GN1	none	782170	646402	412405	156970	280344	629427	618620	334390	-57%	-17%	-46%
3d	GT1	none	636	435	5410	448	0	0	0	0	-100%	-100%	NA
3d	LL1	none	502828	626671	628949	819031	1299306	684589	981146	915409	82%	32%	-7%
3d	TR1	CPART11	0	0	0	0	0	0	0	44284	NA	NA	NA
3d		CPART13	0	0	0	0	0	0	2778013	3134240	NA	NA	13%
3d		none	12906880	10947581	9190944	7723086	7641364	6970660	4557007	3509577	-73%	-62%	-23%
3d	TR1 Total		12906880	10947581	9190944	7723086	7641364	6970660	7335020	6688101	-48%	-28%	-9%
3d	TR2	CPART11	0	0	0	0	0	0	0	1054957	NA	NA	NA
3d		CPART13	0	0	0	0	0	0	4524898	2731450	NA	NA	-40%
3d		none	7230404	6735807	5761558	5613455	5895213	6011367	831889	902250	-88%	-85%	8%
3d	TR2 Total		7230404	6735807	5761558	5613455	5895213	6011367	5356787	4688657	-35%	-22%	-12%
3d	TR3	none	188903	98285	41544	11680	573	11321	1323	0	-100%	-100%	-100%
3d	Total regulated gears		21719742	19315203	16176212	14416615	15120959	14307364	14292896	12626557	-42%	-24%	-12%
3d	none	none	16707894	22172777	18315407	15475755	14450302	12839062	11715893	10458554	-37%	-44%	-11%
3d	Total		38427636	41487980	34491619	29892370	29571261	27146426	26008789	23085111	-40%	-35%	-11%

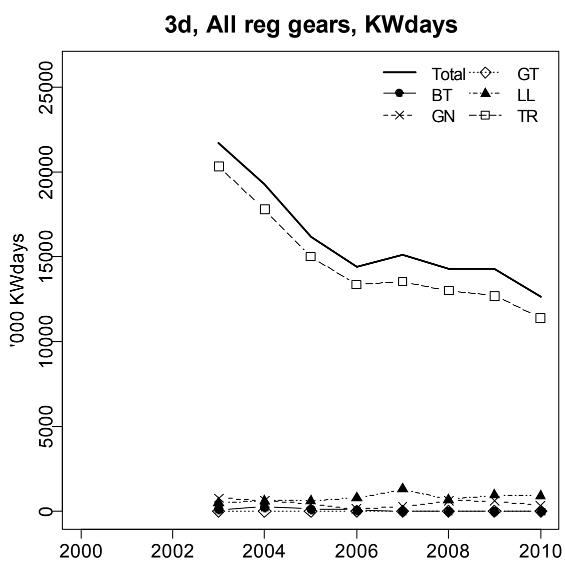


Figure 6.5.1.1 West of Scotland. Trend in nominal effort (kW*days at sea) by gear types as defined by Coun. Reg. 57/2011, 2000-2010.

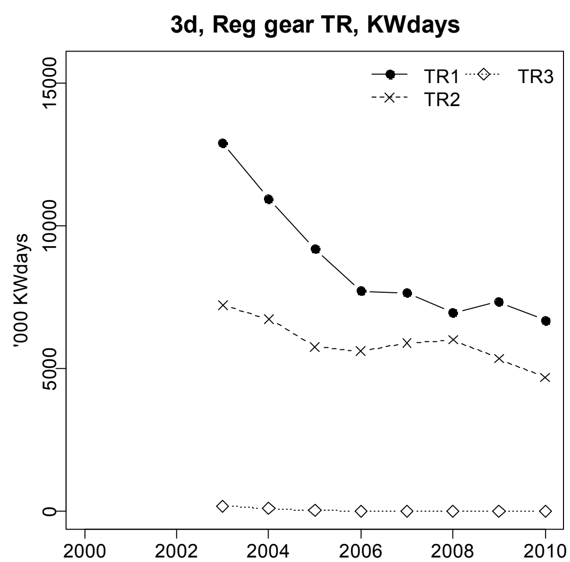


Figure 6.5.1.2 West of Scotland. Trend in nominal effort (kW*days at sea) by TR gear groups as defined by Coun. Reg. 57/2011, 2000-2010.

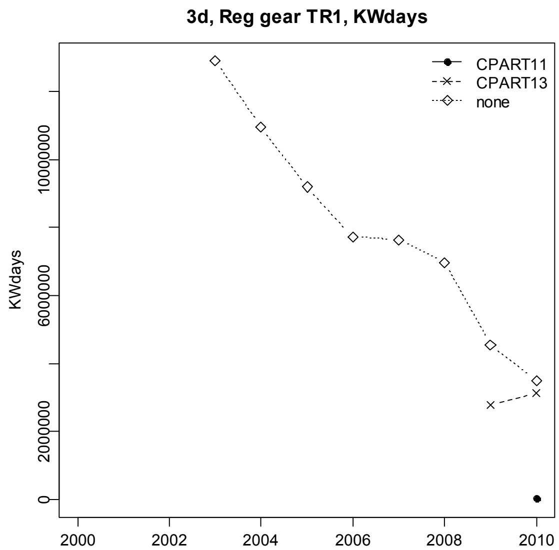


Figure 6.5.1.3 West of Scotland. Trend in nominal effort (kW*days at sea) by specon for regulated gear TR1.

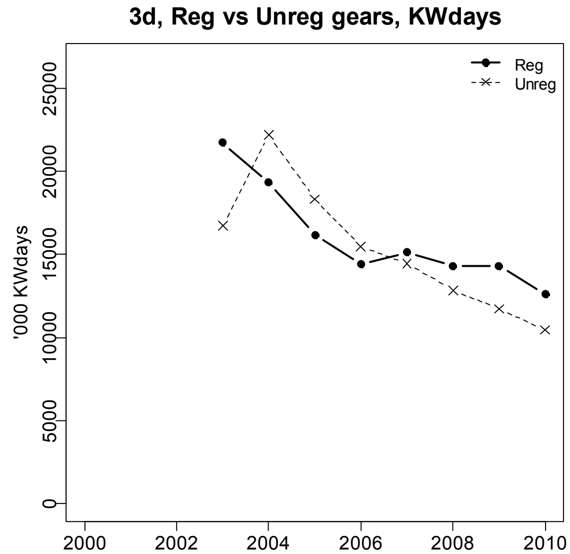


Figure 6.5.1.5 West of Scotland. Trend in nominal effort (kW*days at sea) by regulated gear groups (combined) as defined by Coun. Reg. 1342/2008 compared to unregulated gear groups (combined), 2000-2010.

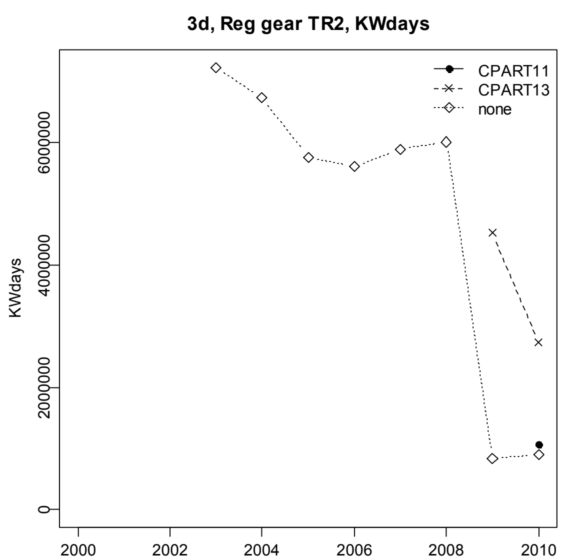


Figure 6.5.1.4 West of Scotland. Trend in nominal effort (kW*days at sea) by specon for regulated gear TR2.

6.5.2. Trend in catch estimates in weight and numbers at age by derogation in management area 3d: West of Scotland

Table 6.5.2.1 lists the landings and discards for the main species by derogations according to Coun. Reg. (EC) 1342/2008. The data given in Table 6.5.2.1 forms the basis of Figure 6.5.2.1 displaying the relative catch compositions by derogations for the years 2004-2010. For brevity, the Figure 6.5.2.1 only presents results for anglerfish (ANF), cod (COD), haddock (HAD), hake, (HKE), *Nephrops* (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). Discard information on *Nephrops* for any gear and for all other species for non-trawl gears was not available for this report. Therefore the lack of the dark bars representing discards in these figures indicates a lack of observations for non-trawl gears and a lack of information for Nephrops rather than an absence of discards.

A description of the catch compositions of the derogations relevant to the area follows:-

TR1 -- The main species caught are haddock, saithe and anglerfish. The landings of hake have been steadily rising. The landings of both these two species now well exceed those of cod, the landings of the latter reflect the steady reduction in the cod TAC. Catches of cod have remained much higher than landings because of increased discards.

TR2 – Landings are dominated by *Nephrops*. Considering landings across all gear categories this species contributes the greatest contribution to landings among the demersal species. Bycatch of the finfish occur with historically high discard rates of haddock and whiting, however haddock catches have declined steadily and whiting catches have greatly reduced such that they have been very low in 2009 and 2010.

TR3 – Landings for this gear category are negligible for this region.

GN1 – This category lands anglerfish, hake and saithe. The landings of hake and saithe increased rapidly to 2008 but the overall quantities are still small.

LL1 – The longline fishery lands hake almost exclusively. Landings of hake are up to 6 times that from the gillnet fishery.

Unregulated (POTS) – Of those gears not regulated under Coun. Reg. (EC) 1342/2008 the most significant landings of the species considered come from pots – in this case Nephrops (although the gear takes numerous other species).

It can be seen that landings of plaice and sole are negligible across all gear categories and west of Scotland it is only relevant to consider age specific data for cod for this region. Also, only trawl gears catch enough cod to merit a catch at age analysis. No age specific data was available for TR2 gear in 2010.

From Figure 6.5.2.2 it can be seen that catch and landings in the TR2 gear group are predominantly of fish at age two. For the larger TR1 mesh category landings are more evenly spread across ages two to four. Until 2005 discards from the TR gears were almost exclusively at ages one and two (with discards generally exceeding landings for fish at age one). In 2006 noticeable discards at age 3 were recorded against the TR1 gears. There was also greatly increased catch and discarding of cod at age one across both TR gear categories in 2006. This is believed to reflect new UK and Irish legislation successfully curtailing illegal landings. It is also considered evidence of a strong 2005 year class as is discards across gear categories of cod age two in 2007 and age 3 in 2008. In the TR1 gear category the majority of the catch of age two cod in 2007, age three cod in 2008 and cod at ages 2 to 4 in 2009 was discarded. This is believed to be because cod quota restrictions prevent a greater proportion being landed. Also for gear TR1 catches of age one cod in 2009 and age two cod in 2010 are consistent with ICES assessments for division VIa cod which indicated a relatively strong 2008 year class.

The overall discard rate of cod (by weight) has increased in years subsequent to 2003 (Table 6.5.2.1). This was due initially to higher discard rates in the smaller meshed category (TR2) but in 2006 the recorded discard rate for the TR1 gear group leapt from 4% to 50% (reflecting legislation successfully curtailing illegal landings). The rate of discarding in the TR1 gears have been between 80 and 90% in 2008-2010. There appears little difference between the CPART13 and 'none' categories. Catches of cod by TR2 'none' have been negligible since 2009 but the discard rates recorded for TR2 CPART13 and CPART11 are still very high. As mentioned above it is believed the present high discard rates result from a combination of restrictive quotas, fishing opportunities for other species and year classes of cod (2005 and 2008 year classes) large enough to allow catches over and above the cod quota.

Table 6.5.2.1 West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation existing in Table 1 of Annex IIA of Coun. Reg. (EC) 57/2011, 2003-2010.

SPECIES	REG GEAR	SPECON	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
ALF	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0
ANF	BT1	none	14	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	298	0	0	357	0	0	242	0	0	210	0	0	455	0	0	484	0	0	87	0	0
	GT1	none	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1106	9	0.01	1508	13	0.01
		none	1888	1038	0.35	2434	6	0	2194	0	0	2875	268	0.09	3002	47	0.02	1824	0	0	292	3	0.01
	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0	0	40	0	0
		none	341	155	0.31	328	7	0.02	410	0	0	449	0	0	212	6	0.03	21	0	0	2	0	0
	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
ARU	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	59	6	0.09
		none	16	1	0.06	34	16	0.32	3	0	0	0	39	1	0	1	1	0	0	0	0	0	0
	TR2	none	0	54	1	0	2	1	0	0	0	0	0	0	0	18	1	0	0	0	0	0	0
BLI	BT1	none	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	4	0	0	4	0	0	1	0	0	23	0	0	23	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178	0	0	142	0	0
		none	3559	0	0	3059	0	0	2879	0	0	2748	0	0	2154	0	0	2041	0	0	1642	0	0
	TR2	none	1	0	0	1	0	0	1	0	0	0	0	0	99	0	0	99	0	0	0	0	0
BRF	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	LL1	none	13	0	0	3	0	0	6	0	0	3	0	0	4	0	0	7	0	0	7	0	0
	TR1	none	54	0	0	71	0	0	51	0	0	53	0	0	85	0	0	86	0	0	88	0	0
BSF	BT1	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	73	0	0
		none	2813	0	0	2624	0	0	1852	0	0	2143	0	0	2381	0	0	2355	0	0	1839	1	0
	TR2	none	1	0	0	2	0	0	1	0	0	0	0	0	127	0	0	127	0	0	0	0	0
CFB	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0
CMO	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	1
		none	1	0	0	0	0	0	1	0	0	2	97	0.98	1	151	0.99	0	0	0	307	15	0.05
COD	BT1	none	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	1	0	0	6	0	0	9	0	0	14	0	0	10	0	0	6	0	0	3	0	0
	LL1	none	5	0	0	5	0	0	14	0	0	8	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118	709	0.86	157	617	0.8
		none	479	13	0.03	436	16	0.04	387	377	0.49	358	834	0.7	331	1070	0.76	95	0	0	49	403	0.89
	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	1
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	47	0.87	5	0	0
		none	90	87	0.49	46	39	0.46	35	230	0.87	64	444	0.87	48	11	0.19	3	0	0	1	0	0
COE	BT1	none	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	26	0	0	8	0	0	0	0	0	1	0	0	2	0	0	2	0	0	6	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	27	0	0
		none	55	0	0	36	0	0	13	0	0	18	0	0	47	0	0	38	0	0	23	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		none	17	4	0.19	6	0	0	5	0	0	2	0	0	0	0	0	0	0	0	0	0	0
CRE	GN1	none	40	0	0	21	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0
		none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		none	10	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
CYO	GN1	none	460	0	0	97	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	146	0	0	43	0	0	109	0	0	5	0	0	1	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	20	0	0
		none	147	0	0	21	0	0	27	0	0	66	0	0	37	0	0	0	0	0	48	114	0.7
	TR2	none	3	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CYP	GN1	none	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	102	0	0	86	0	0	154	0	0	68	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 6.5.2.1 (cont) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation existing in Table 1 of Annex IIA of Coun. Reg. 57/2011, 2004-2010.

SPECIES	REG GEAR	SPECON	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
DCA	GN1	none	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EPI	TR1	none	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	0.38
	TR2	none	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ETR	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
ETX	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FOX	GN1	none	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	47	0	0	4	0	0	53	0	0	38	0	0	32	0	0	12	0	0	48	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	3	0.03	124	52	0.3
		none	218	0	0	136	0	0	86	0	0	111	30	0.21	79	0	0	0	0	0	0	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		none	8	61	0.88	8	21	0.72	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
GAM	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
GUP	GN1	none	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	103	0	0	29	0	0	106	0	0	2	0	0	2	0	0	0	0	0	0	0	0
GUQ	BT1	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	288	0	0	23	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	160	0	0	28	0	0	31	0	0	8	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	26	0	0	29	0	0	37	0	0	72	0	0	50	0	0	50	0	0	150	2004	0.93
	TR2	none	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0
HAD	BT1	none	7	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	3	0	0	6	0	0	10	0	0	16	0	0	17	0	0	8	0	0
	LL1	none	1	0	0	5	0	0	5	0	0	4	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2609	1821	0.41	2783	230	0.08
		none	2791	2701	0.49	2960	1415	0.32	5517	4883	0.47	3419	3229	0.49	2508	760	0.23	115	0	0	59	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	31	0.42	20	2547	0.99
		none	504	3076	0.86	238	1482	0.86	207	954	0.82	263	843	0.76	233	459	0.66	14	0	0	4	188	0.98
	TR3	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HKE	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	14	0	0	32	0	0	115	0	0	338	0	0	1123	0	0	1123	0	0	1017	0	0
	LL1	none	307	0	0	699	0	0	1126	0	0	1939	0	0	929	0	0	2050	0	0	2368	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633	3783	0.86	885	1156	0.57
		none	645	1113	0.63	1129	1199	0.52	918	0	0	1093	1293	0.54	1657	287	0.15	1086	0	0	1653	0	0
	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	23	0	0
		none	181	3168	0.95	149	681	0.82	167	0	0	107	0	0	100	1011	0.91	8	0	0	6	3	0.33
	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
JAD	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1
JAX	GT1	none	0	0	0	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	21	0.7	2	139	0.99
		none	1	124	0.99	0	1170	1	2	0	0	0	183	1	2	84	0.98	0	0	0	0	0	0
	TR2	none	7	416	0.98	0	60	1	2	0	0	0	0	0	1	4	0.8	0	0	0	0	0	0
KEF	GN1	none	180	0	0	508	0	0	41	0	0	64	0	0	9	0	0	1	0	0	11	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAC	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	GT1	none	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	45	0.8	2	11	0.85
		none	1	236	1	3	120	0.98	2	0	0	3	4	0.57	8	11	0.58	1	0	0	1	0	0
	TR2	none	539	769	0.59	1	313	1	6	0	0	4	0	0	3	15	0.83	0	0	0	7	0	0
	TR3	none	0	0	0	439	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEP	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	372	0	0	262	0	0
		none	197	0	0	367	0	0	521	0	0	514	0	0	469	0	0	24	0	0	1	0	0
	TR2	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1679	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8545	0	0	5600	0	0
		none	7822	0	0	7728	0	0	10330	0	0	12891	0	0	11993	0	0	1186	0	0	1911	0	0
	TR3	none	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
ORY	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR2	none	1	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHO	TR1	none	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 6.5.2.1 (cont) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation existing in Table 1 of Annex IIA of Coun. Reg. 57/2011, 2004-2010.

SPECIES	REG GEAR	SPECON	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
PLE	BT1	none	10	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	2	0.05	49	3	0.06
		none	107	2523	0.96	37	19	0.34	36	0	0	46	91	0.66	32	13	0.29	0	0	0	0	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	0	0
		none	65	422	0.87	52	36	0.41	34	0	0	29	0	0	12	1	0.08	0	0	0	1	0	0
	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POK	BT1	none	6	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	3	0	0	68	0	0	280	0	0	370	0	0	370	0	0	290	0	0
	LL1	none	2	0	0	4	0	0	7	0	0	17	0	0	6	0	0	4	0	0	2	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3138	10	0	3242	493	0.13
		none	4477	877	0.16	6218	7126	0.53	9229	4641	0.33	6077	1540	0.2	5650	2222	0.28	3209	0	0	1651	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0.5
		none	39	65	0.62	30	33	0.52	11	274	0.96	7	35	0.83	18	318	0.95	17	0	0	0	0	0
RAJ	BT2	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	12	0	0	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0	0	0
	GT1	none	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	1707	0.96	103	537	0.84
		none	60	1265	0.95	37	90	0.71	23	0	0	44	444	0.91	49	116	0.7	2	0	0	0	0	0
	TR2	none	262	3639	0.93	150	1167	0.89	137	0	0	61	0	0	48	22	0.31	4	0	0	1	0	0
	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RHG	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		none	17	0	0	23	0	0	15	0	0	22	0	0	2	0	0	2	0	0	25	0	0
	TR2	none	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIB	TR1	none	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	8	0.28
	TR2	none	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RJY	TR2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RNG	BT1	none	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	38	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	23	5	0.18
		none	3706	0	0	3102	0	0	2419	0	0	2185	0	0	1708	4	0	1699	0	0	1591	1	0
	TR2	none	6	0	0	11	0	0	3	0	0	0	0	0	91	0	0	91	0	0	0	0	0
SBL	LL1	none	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCE	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
		none	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCK	GN1	none	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	108	0	0	19	0	0	25	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCR	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SFS	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SHO	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	1
		none	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0
	TR2	none	0	89	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOL	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	21	0	0
		none	2	0	0	1	0	0	0	0	0	2	4	0.67	2	0	0	0	0	0	1	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
		none	17	6	0.26	15	0	0	12	0	0	13	0	0	11	0	0	0	0	0	1	0	0
	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SYR	LL1	none	0	0	0	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0
	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TJX	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
WHB	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	2	1
		none	0	1	1	0	27	1	0	0	0	0	4	1	0	4	1	0	0	0	0	0	0
	TR2	none	0	359	1	0	22	1	0	0	0	0	0	0	0	19	1	0	0	0	0	0	0
	TR3	none	0	0	0	1475	0	0	0	0	0	0	0	0	415	0	0	0	0	0	0	0	0
WHG	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BT2	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GN1	none	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0
	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TR1	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	453	782	0.63	341	981	0.74
		none	436	1502	0.78	132	287	0.68	185	62	0.25	415	146	0.26	353	34	0.09	1	0	0	0	0	0
	TR2	CPART13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	57	0.7	3	12	0.8
		none	368	2607	0.88	204	1018	0.83	197	6014	0.97	68	326	0.83	86	266	0.76	0	0	0	2	0	0
	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WRF	TR1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

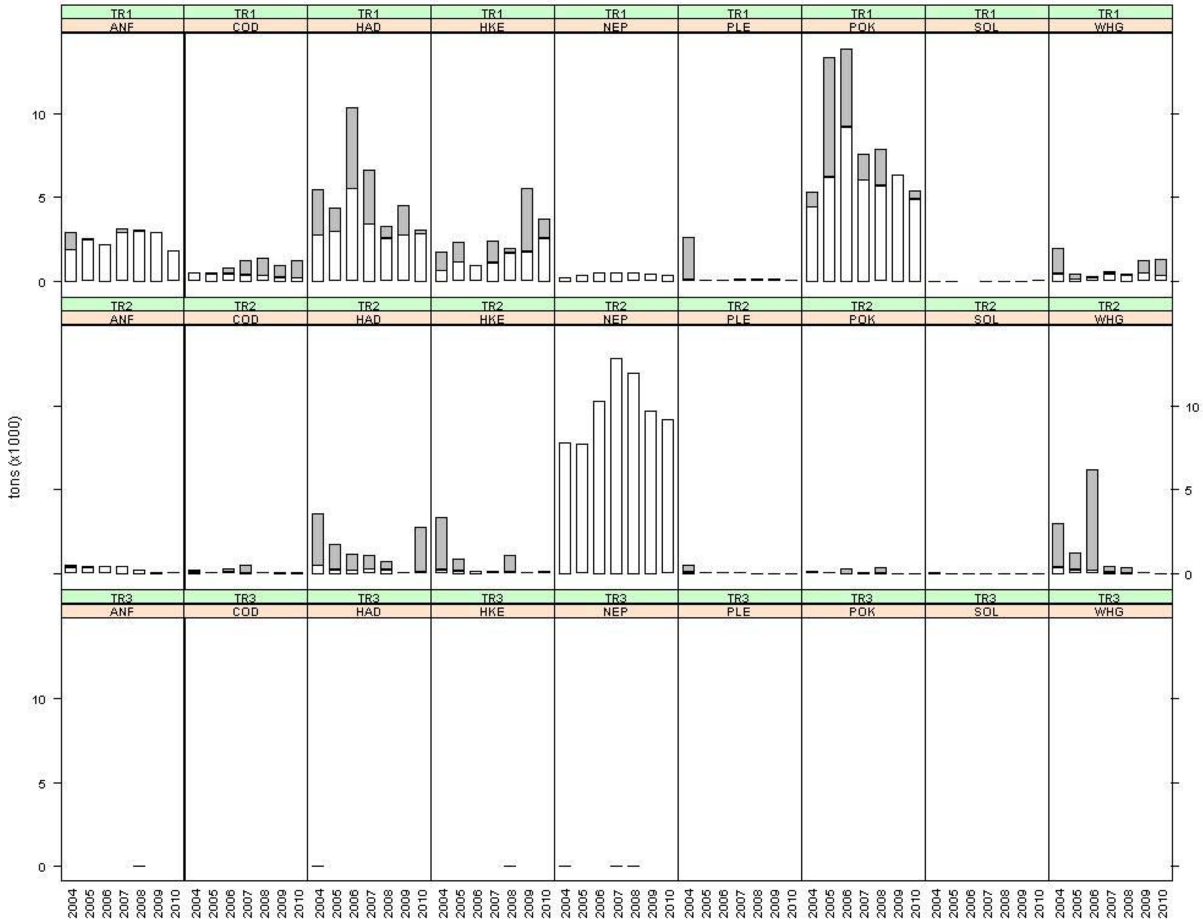


Figure 6.5.2.1 West of Scotland. Landings (t) and discards (t) by derogations in Coun. Reg. (EC) 1342/2008 and species, 2004-2010 (from left to right). White bars represent landings, grey bars discards. Note that discard data are only available for some species and gears. The lack of discard information for a given species/gear in this figure represents no information rather than zero discards.

Figure 6.5.2.1 (cont) West of Scotland. Landings (t) and discard (t) by derogations in Coun. Reg. (EC) 1342/2008 (also POTS) and species, 2004-2010 (from left to right). White bars represent landings, grey bars discards. Note that discard data are only available for some species and gears. The lack of discard information for a given species/gear in this figure represents no information rather than zero discards.

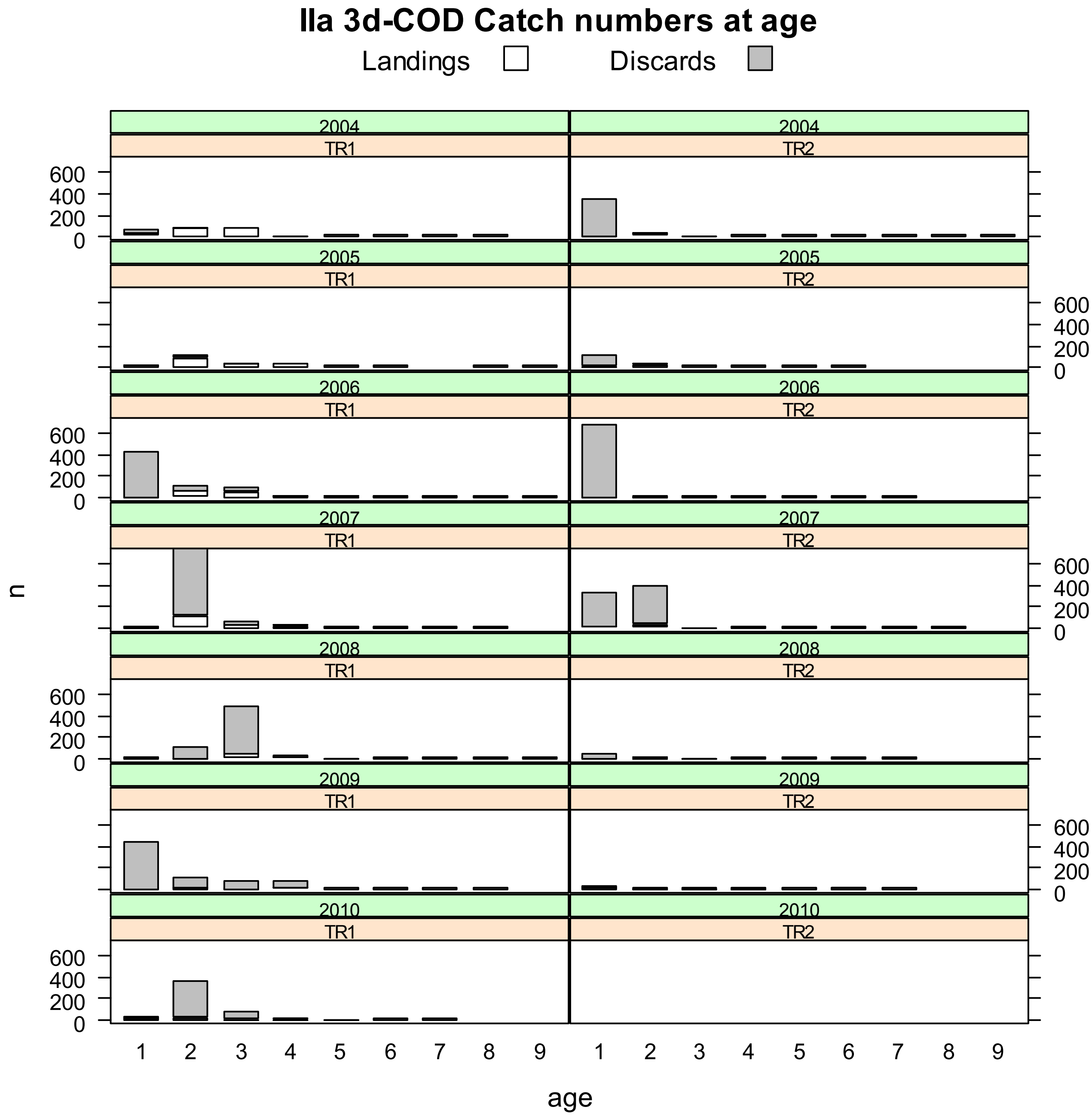


Figure 6.5.2.2 West of Scotland. Cod landings and discards ('000) at ages 1-9 by major derogations under Coun. Reg. (EC) 57/2011, 2004-2010 (from left to right). White bars represent landings, grey bars discards. No age specific data was available for TR2 gear in 2010.

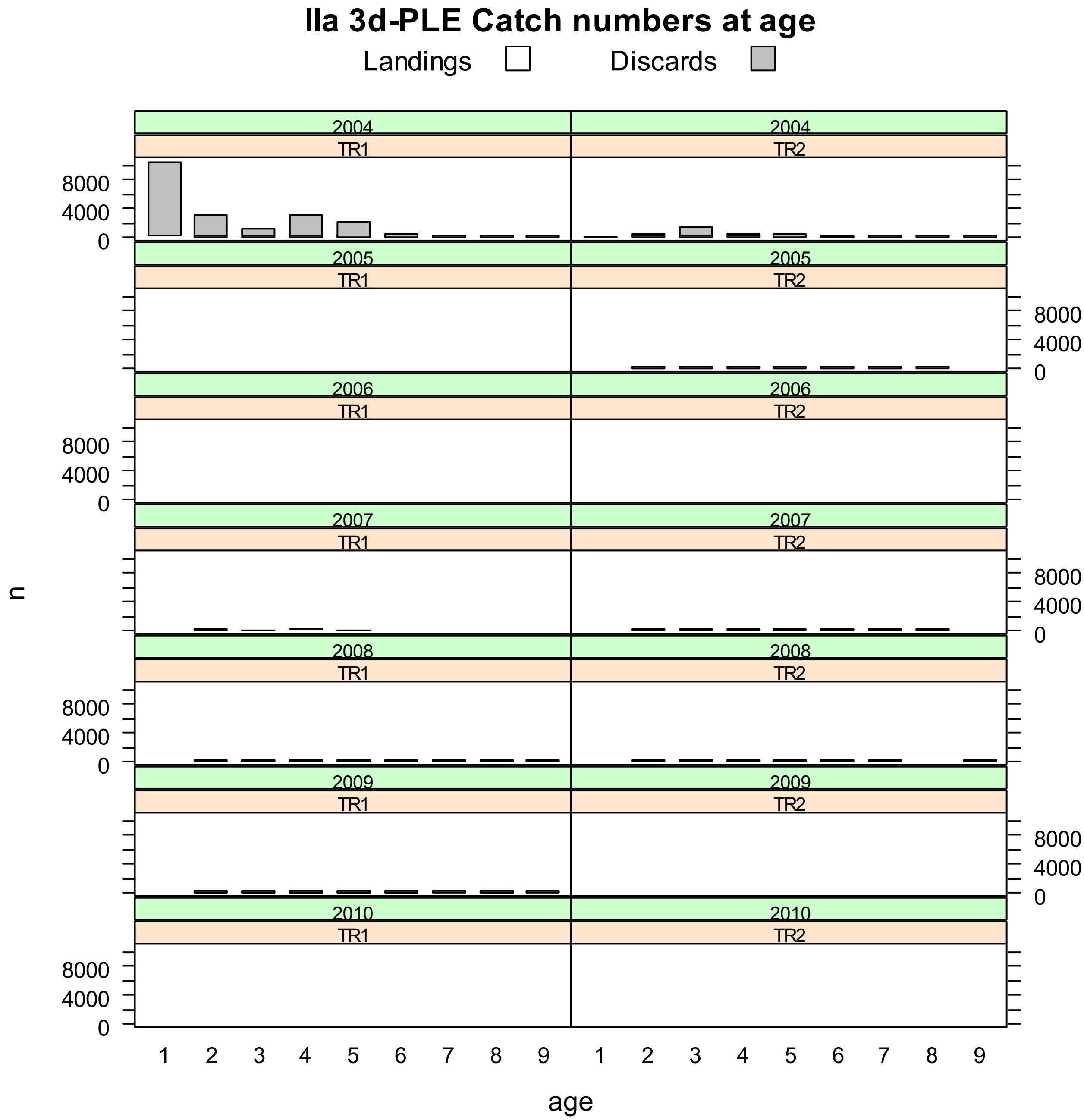


Figure 6.5.2.3 West of Scotland. Plaice landings and discards ('000) at ages 1-9 by major derogations under Coun. Reg. (EC) 57/2011, 2004-2010 (from left to right). White bars represent landings, grey bars discards.

6.5.3. Trend in CPUE of cod by derogation in management area 3d: West of Scotland

Section 6.5.2 shows how the catches of plaice and sole are negligible in the west of Scotland waters and therefore this section only considers CPUE of cod. Table 6.5.3.1 shows cod catch per unit effort (CPUE), recorded in g/kWdays for all derogations within Coun. Reg (EC) 1342/2008 while table 6.5.3.2 shows landings per unit effort for the same derogations. Section 6.5.1 showed longlines to be the most significant gear category after trawl and seine gears west of Scotland but the tables show CPUE of cod for this gear type (LL1) to be low with no catch of cod recorded from 2008.

Figures 6.5.3.1 to 6.5.3.2 show cod CPUE and LPUE respectively for the top four gear types under Coun. Reg (EC) 1342/2008, ranked in terms of average value over the years 2003-2010. It should be noted no discard information is available for gill nets (GN1) or the beam trawl categories (BT1 and BT2) such that results for these gear types are effectively LPUE in each table and/or figure. It is clear from Figure 6.5.3.1 that CPUE values have increased considerably for the TR1 gear type since 2005. ICES assessments have estimated the 2005 – and to a lesser extent the 2008 - year classes of cod to be large compared to the norm since 2000, and also a slow increase in SSB since 2006. The pattern of CPUE is consistent with the catchability of fish in the stronger year classes increasing as the fish grow in size (and possibly redistribute from nursery areas) and an increase in overall stock abundance. TACs for cod have declined over the same period and from Figure 6.5.3.2 it can be seen LPUE for the TR1 gears remained constant between 2004-2008 and has fallen again to a new lower level for 2009-2010.

To illustrate the point further Figure 6.5.3.3 shows the ratio of catch to landings for cod for the gear type TR1. Up to 2005 very few discards of cod were recorded for the TR1 gear resulting in a catch/landings value close to 1. Since then this ratio has increased so that by 2010 catch was approximately 6 times landings. Figure 6.5.2.2 suggests the increase in CPUE to be due to the 2005 and 2008 year classes. This result is consistent with results from the ICES division VIa cod assessment. Uncertainty of discard observation data for the TR2 gear mean results for the TR2 gear have not been included in Figure 6.5.3.3.

Table 6.5.3.1 West of Scotland. Cod CPUE (g/(kW*days)) by derogation in Coun. Reg. (EC) 57/2011 and year, 2003-2010.

SPECIES	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
COD	3d	BT1	none	32	36	8	0		0	0	0	0
COD	3d	BT2	none	0					0	0	0	0
COD	3d	GN1	none	8	2	15	57	50	14	10	9	11
COD	3d	LL1	none	18	8	8	17	6	0	0	0	0
COD	3d	TR1	CPART13	0	0	0	0	0	0	298	247	271
COD	3d	TR1	none	77	45	49	99	156	201	21	129	129
COD	3d	TR2	CPART11	0	0	0	0	0	0	0	16	16
COD	3d	TR2	CPART13	0	0	0	0	0	0	12	1	8
COD	3d	TR2	none	47	26	15	47	86	10	4	1	8

Table 6.5.3.2 West of Scotland. Cod LPUE (g/(kW*days)) by derogation in Coun. Reg. (EC) 57/2011 and year, 2003-2010.

SPECIES	REG AREA	REG GEAR	SPECON	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
COD	3d	BT1	none	32	36	8	0		0	0	0	0
COD	3d	BT2	none	0					0	0	0	0
COD	3d	GN1	none	8	2	15	57	50	14	10	9	11
COD	3d	LL1	none	18	8	8	17	6	0	0	0	0
COD	3d	TR1	CPART13	0	0	0	0	0	0	42	50	47
COD	3d	TR1	none	77	44	47	50	47	47	21	14	32
COD	3d	TR2	CPART11	0	0	0	0	0	0	0	0	0
COD	3d	TR2	CPART13	0	0	0	0	0	0	2	1	2
COD	3d	TR2	none	34	13	8	6	11	8	4	1	6

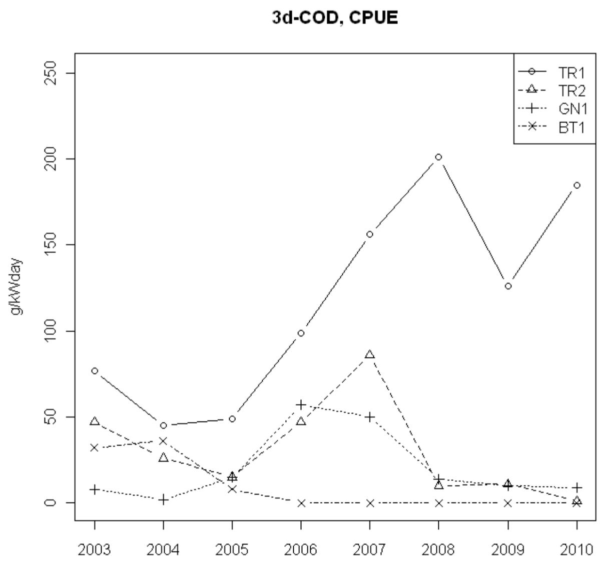


Figure 6.5.3.1 West of Scotland. Cod CPUE for the four gear categories with highest CPUE.

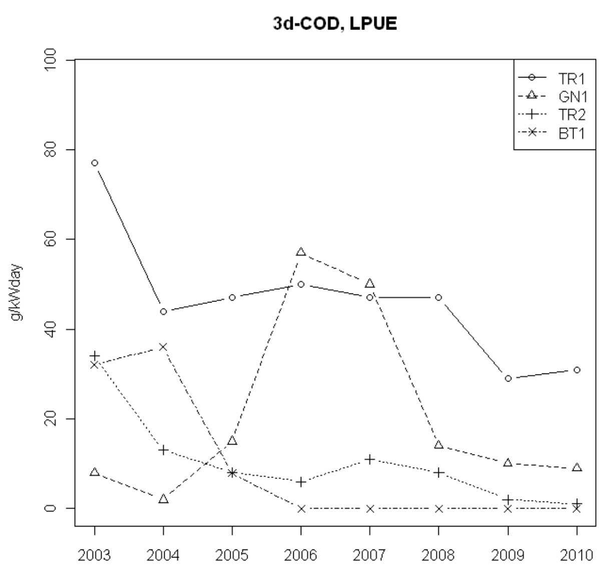


Figure 6.5.3.2 West of Scotland. Cod LPUE for the four gear categories with highest LPUE

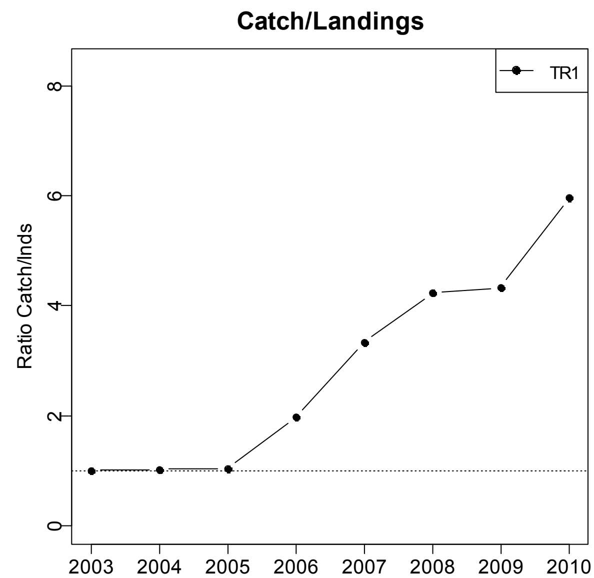


Figure 6.5.3.3 West of Scotland. Ratio of Cod catch to landings for the gear group TR1 under Coun. Reg. 1342/2008.

6.5.4. Ranked derogations according to cod catches in management area 3d: West of Scotland

Tables 6.5.4.1 and 6.5.4.2 show, respectively, cod catch and cod landings (tonnes) by gear types as specified in Coun. Reg. (EC) 1342/2008, ranked according to their 2010 values. From these Tables the most important category in terms of cod catch and landings is TR1 with a three year average of just less than 96% of the VIa cod catch – 91% of cod landings - total by weight. The second most important gear category is TR2, which from section 6.5.2 can be seen to be a gear category with Nephrops as the primary landed species. The ranking of these two gear types is consistent whether the 2010 values or a three year average is used but the contribution of TR2 gear to catches has noticeably declined from 2008 and to landings from 2009. In terms of catch the contribution of all other gear types is less than 1%, but for landings gill nets contribute 1%.

Ranking in terms of numbers of fish are available on the JRC website https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

. EWG-11-11 notes that the estimation of ranking by numbers of fish uses only categories for which age information is available. Categories without any information about age compositions are disregarded.

Table 6.5.4.1 West of Scotland. Gear derogations (Coun. Reg. 57/2011) ranked according to relative cod catch in tonnes, 2003-2010. Ranking is according to the year 2010.

REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	mean 08-10
3d	COD	TR1	0.74	0.72	0.82	0.73	0.69	0.95	0.94	0.98	0.956
3d	COD	TR2	0.25	0.26	0.16	0.25	0.30	0.04	0.06	0.02	0.039
3d	COD	GN1	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.005
3d	COD	LL1	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.000
3d	COD	BT2	0.00								
3d	COD	BT1	0.00	0.01	0.00	0.00					

Table 6.5.4.2 West of Scotland. Gear derogations (Coun. Reg. 57/2011) ranked according to relative cod landings in tonnes, 2003-2010. Ranking is according to the year 2010.

REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	mean 08-10
3d	COD	TR1	0.79	0.83	0.88	0.87	0.81	0.85	0.93	0.96	0.91
3d	COD	TR2	0.20	0.15	0.09	0.08	0.14	0.12	0.05	0.03	0.07
3d	COD	GN1	0.00	0.00	0.01	0.02	0.03	0.03	0.03	0.01	0.02
3d	COD	LL1	0.01	0.01	0.01	0.03	0.02	0.00	0.00	0.00	0.00
3d	COD	BT2	0.00								
3d	COD	BT1	0.00	0.01	0.00	0.00					

6.5.5. Unregulated gear in management area 3d: West of Scotland

Category 'none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in terms of effort (kW*Days at sea) and cod, plaice and sole catches.

'None' effort is a high proportion of overall effort West of Scotland, accounting for between 45 and 55% of overall effort in the years 2003-2010. Significant categories are pelagic trawls, dredges and pots. Effort using pelagic trawl gear rose to a peak in 2004 but has since steadily declined, falling to the lowest effort recorded in 2010. Effort by dredge gears has declined to roughly one half of the peak effort in 2002; there is a general trend of slow increase in effort using pots since 2000, with 2010 representing a new highest value for the time series.

Tables 6.5.5.2 to 6.5.5.4 show catches of cod, plaice and sole by gear sub-category. It can be seen that insignificant amounts of these species are caught within the 'none' category.

Table. 6.5.5.1. West of Scotland. Unregulated gear according to Coun. Reg. (EC) 57/2011 effort (kW*Days) by gear type, 2000-2010.

REG AREA	REG GEAR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
3d	BEAM	10523	12528			10136						
	DEM_SEINE	75298	24711	31916	644							
	DREDGE	1981727	2037696	2245875	1956374	1684266	1510557	1161672	911530	1075527	1071327	1002770
	none	50876	57096	59694	52102	26858	42249	50920	63504	68847	99379	100269
	OTTER	2016559	1818225	1492506	188543	514781	654988	290705	41340	151384	171586	98570
	PEL_SEINE	609134	492967	358793	249004	266254	157776	186486	113645			53255
	PEL_TRAWL	9624812	10610905	12429002	11623490	17006375	13187476	11060133	9890496	8636882	7488991	5721420
	POTS	2188417	2546277	2497117	2637737	2664107	2762361	2725839	3429787	2906422	2884610	3482270
Unreg gear total		16557346	17600405	19114903	16707894	22172777	18315407	15475755	14450302	12839062	11715893	10458554

Table. 6.5.5.2. West of Scotland. Unregulated gear according to Coun. Reg. (EC) 57/2011 cod catch (tonnes) by gear type, 2004-2010.

SPECIES	REG GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
COD	DEM_SEINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COD	DREDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COD	NONE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COD	OTTER	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COD	PEL_SEINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COD	PEL_TRAWL	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0
COD	POTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table. 6.5.5.3. West of Scotland. Unregulated gear according to Coun. Reg. (EC) 57/2011 plaice catch (tonnes) by gear type, 2004-2010.

SPECIES	REG GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
PLE	BEAM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLE	DEM_SEINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLE	DREDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLE	OTTER	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLE	PEL_TRAWL	4	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
PLE	POTS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table. 6.5.5.4. West of Scotland. Unregulated gear according to Coun. Reg. (EC) 57/2011 sole catch (tonnes) by gear type, 2004-2010.

SPECIES	REG GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
SOL	BEAM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOL	DEM_SEINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOL	DREDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOL	NONE	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SOL	OTTER	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOL	PEL_TRAWL	1	0	0	2	0	0	0	0	0	6	0	0	2	0	0	0	0	0	0	0	0
SOL	POTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

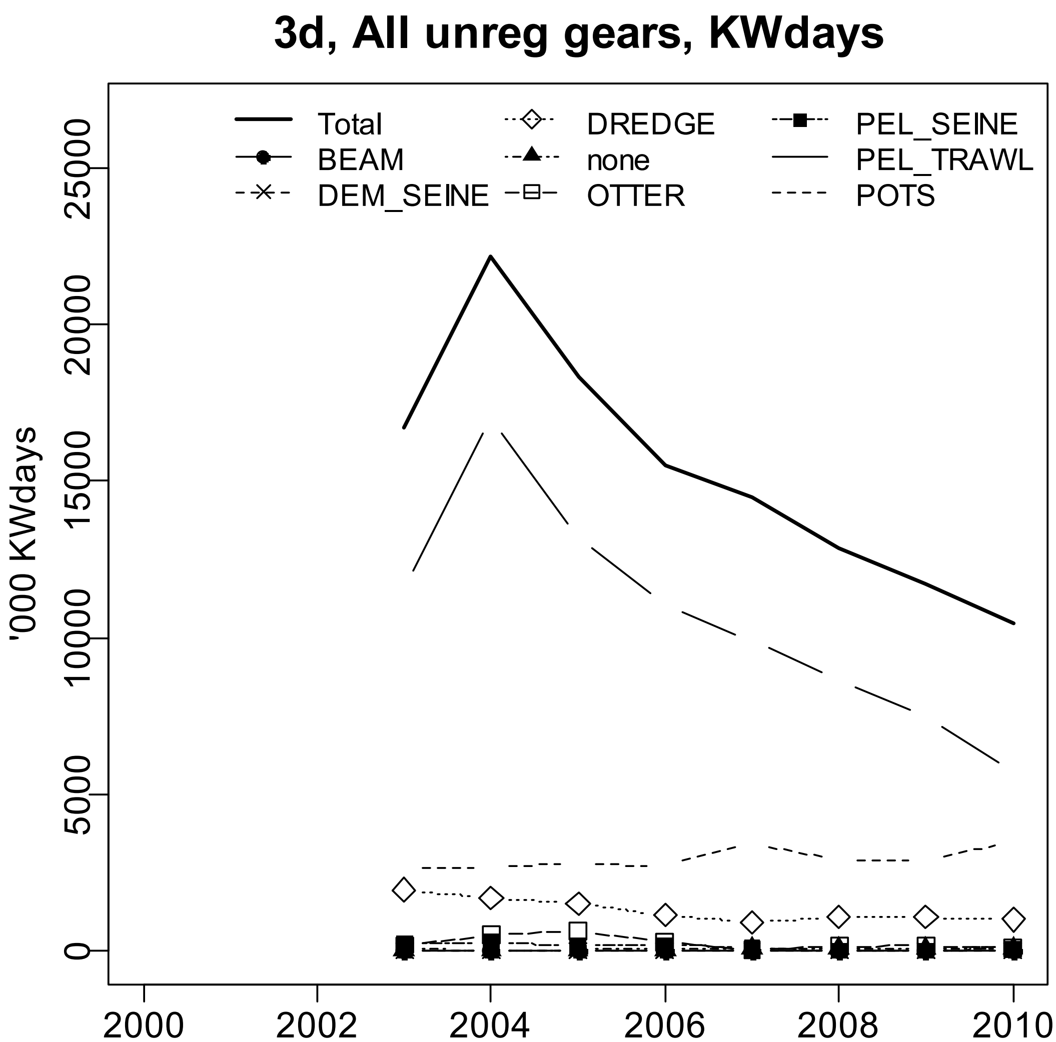


Figure 6.5.5.1 West of Scotland. Unregulated gear according to Coun. Reg. (EC) 1342/2008 (category none) effort (kW*Days) by gear type, 2003-2010.

6.5.6. Vessels <10m in management area 3d: West of Scotland

Activity by vessels <10m in area 3d (west of Scotland) was recorded by Ireland, IOM, UK(EWNI) and UK(Scotland). Descriptions of the type and quality of data available for assessing effort and landings of vessels <10m can be found in section 5. Effort by nation and gear type is shown in Table 6.5.6.1.

Overall effort is 20% higher in 2010 compared to 2003 although it has been relatively stable since 2006. Greatest effort comes from Scottish vessels deploying pots. The effort employed in this category to a certain extent dictates the perception of overall effort changes in this region. The second largest effort total is for Scottish vessels employing TR2 gear. Effort in this category is roughly one tenth that in pots and has declined from a high in 2006. Although small in absolute terms compared to Scottish effort there have been large increases in Northern Irish effort in pots and dredging in recent years.

Table 6.5.6.1 West of Scotland. Effort (kW*days) of vessels under 10 metres by gear type and member state, 2000-2010

REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	rel. chng 03	rel. chng 04-06	rel. chng 09
3d	DREDGE	none	ENG	205	285		536			2726				825	54%	-70%	NA
3d	DREDGE	none	IOM		3100		2728			774					-100%	-100%	NA
3d	DREDGE	none	NIR				252		13886	14934	10218	10819	16248	19622	7687%	36%	21%
3d	DREDGE	none	SCO	33834	56366	44409	84393	104545	66603	19995	31968	57077	34484	33490	-60%	-47%	-3%
3d	GN1	none	SCO	101	342				56	468	1800	6493			NA	-100%	NA
3d	GT1	none	SCO								368			610	NA	NA	NA
3d	LL1	none	FRA											1419	NA	NA	NA
3d	LL1	none	NIR										66		NA	NA	-100%
3d	LL1	none	SCO	101			25			51	241	740	664	410	1540%	704%	-38%
3d	none	none	DEN	96	56		111	222	201	204	180	180	36		-100%	-100%	-100%
3d	none	none	SCO	432072	324668	87512	110078	125306	120513	163399	124414	116648	162780	170688	55%	25%	5%
3d	OTTER	none	ENG	205		109				783			75		NA	-100%	-100%
3d	OTTER	none	NIR											112	NA	NA	NA
3d	OTTER	none	SCO	8878	5623	4387	9008	7812	18258	20563	5222	5669	2366	4390	-51%	-72%	86%
3d	POTS	none	ENG	21165	36110	642	3380	194	7137	1682	8794	1500	11417	1047	-69%	-65%	-91%
3d	POTS	none	NIR	32589		1540	7518	4192	2700	74352	92327	115948	67827	96875	1189%	258%	43%
3d	POTS	none	SCO	1652393	1890354	2321198	2743791	2775120	3081361	3690442	3625560	3200012	3350815	3459930	26%	9%	3%
3d	TR1	none	SCO	769	4866	222	1266	496	359	2789	2837	969	1991	5272	316%	334%	165%
3d	TR2	none	ENG	50582	13608	17658	9260	3987	11052	6941	14620	12354	1343	217	-98%	-97%	-84%
3d	TR2	none	NIR	2386	5634	2960	8934	5756	1379	8873	5427	6125	7857	14427	61%	170%	84%
3d	TR2	none	SCO	369509	448619	337870	511766	492846	461177	532719	485139	479805	441031	398865	-22%	-20%	-10%
3d	TR3	none	SCO				116								-100%	NA	NA
Total				2604885	2789631	2818507	3493162	3520476	3784682	4541695	4409115	4014339	4099000	4208199	20%	7%	3%

Overall landings by under 10m in AREA 3d West of Scotland

Table 6.5.6.2 summarises landings by vessels under 10m west of Scotland. Only IOM, Ireland, UK(EWNI) and UK(Scotland) recorded both effort and landings in area 3d West of Scotland.

The only significant landings are those of edible crabs (CRE), *Nephrops* (NEP) and scallops (SCE) with the majority being taken by Scottish vessels. Much of the Nephrops and crab catch comes from the creel fishery operating on the west coast while scallops are caught by dredges. Nephrops are also caught by trawls using TR2 mesh size.

Table 6.5.6.2 West of Scotland. Landings and discards (tonnes) and discard rate recorded for vessels under 10 m by gear type, 2004-2010.

REG_AREA	SPECIES	REG_GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
3d	ANF	none	0	0	0			0			0			0	0	0	0			0	0	0	0
3d	ANF	OTTER			0	0	0	0			0			0			0			0			0
3d	ANF	POTS	7	0	0	0	0	0			0			0			0	0	0	0	0	0	0
3d	ANF	TR1			0	0	0	0	0	0	0			0	0	0	0			0			0
3d	ANF	TR2	4	0	0	1	0	0	3	0	0	1	0	0	0	0	0			0	0	0	0
3d	BSF	DREDGE			0			0			0			0			0	0	0	0			0
3d	BSF	POTS			0			0			0	0	0	0			0			0			0
3d	COD	GN1			0			0			0			0	0	0	0			0			0
3d	COD	none	0	0	0			0			0			0			0			0			0
3d	COD	OTTER			0			0			0			0			0			0			0
3d	COD	POTS	0	0	0			0			0	1	0	0			0	1	0	0			0
3d	COD	TR1			0			0			0			0	0	0	0			0			0
3d	COD	TR2	1	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	0	0	0
3d	COE	none	0	0	0	0	0	0	0	0	0			0			0			0			0
3d	COE	POTS			0			0			0			0			0	0	0	0			0
3d	COE	TR2	0	0	0			0	0	0	0	0	0	0			0			0			0
3d	CRE	DREDGE			0	1	0	0			0			0	0	0	0	4	0	0			0
3d	CRE	GN1			0			0	0	0	0	1	0	0	0	0	0			0			0
3d	CRE	GT1			0			0			0			0			0			0	0	0	0
3d	CRE	LL1			0			0	0	0	0			0			0	1	0	0			0
3d	CRE	none	3529	0	0	2460	0	0	2027	0	0	620	0	0	834	0	0	589	0	0	579	0	0
3d	CRE	OTTER			0			0			0	0	0	0			0	2	0	0	0	0	0
3d	CRE	POTS	823	0	0	1017	0	0	1818	0	0	2994	0	0	1729	0	0	2060	0	0	1403	0	0
3d	CRE	TR1			0			0			0			0	0	0	0	2	0	0			0
3d	CRE	TR2			0	0	0	0	2	0	0	6	0	0	4	0	0	335	0	0	1	0	0
3d	HAD	DREDGE			0			0	0	0	0			0			0	0	0	0			0
3d	HAD	none	1	0	0			0			0			0	0	0	0			0			0
3d	HAD	OTTER			0	0	0	0			0			0			0			0			0
3d	HAD	POTS	5	0	0	0	0	0			0	0	0	0			0	8	0	0			0
3d	HAD	TR1			0	0	0	0	1	0	0			0	0	0	0			0			0
3d	HAD	TR2	7	0	0	2	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0
3d	HKE	none	0	0	0			0			0			0	0	0	0			0			0
3d	HKE	OTTER			0	0	0	0			0			0			0			0			0
3d	HKE	POTS	0	0	0			0			0			0	0	0	0	0	0	0	0	0	0
3d	HKE	TR1			0			0	0	0	0			0	0	0	0			0			0
3d	HKE	TR2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3d	MAC	DREDGE			0			0			0			0			0	1	0	0			0
3d	MAC	LL1			0			0	0	0	0	1	0	0	1	0	0			0	2	0	0
3d	MAC	none			0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	56	0	0
3d	MAC	POTS	0	0	0			0	0	0	0	1	0	0	1	0	0	142	0	0	3	0	0
3d	MAC	TR1			0			0			0			0			0	0	0	0			0
3d	MAC	TR2			0			0			0			0			0	17	0	0			0
3d	NEP	DREDGE	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	25	0	0			0
3d	NEP	GN1			0			0			0	0	0	0			0			0			0
3d	NEP	LL1			0			0			0			0	0	0	0	3	0	0	0	0	0
3d	NEP	none			0			0			0	0	0	0	2	0	0	26	0	0	0	0	0
3d	NEP	OTTER	6	0	0	22	0	0	46	0	0	8	0	0	8	0	0	1	0	0	3	0	0
3d	NEP	POTS	1192	0	0	1173	0	0	1260	0	0	1249	0	0	1116	0	0	1161	0	0	1232	0	0
3d	NEP	TR1	1	0	0	0	0	0	8	0	0	22	0	0	1	0	0	2	0	0	18	0	0
3d	NEP	TR2	606	0	0	568	0	0	1022	0	0	1094	0	0	1092	0	0	360	0	0	797	0	0
3d	NEP	TR3			0			0			0			0			0			0			0
3d	PEN	DREDGE			0			0			0			0			0	0	0	0			0
3d	PEN	POTS	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0
3d	PEN	TR1			0			0			0			0			0	0	0	0			0
3d	PEN	TR2			0			0			0			0			0	0	0	0			0
3d	PLE	none	1	0	0			0			0			0	2	0	0			0	2	0	0
3d	PLE	POTS			0			0			0			0			0	24	0	0			0
3d	PLE	TR1			0			0	0	0	0			0	0	0	0			0			0
3d	PLE	TR2	0	0	0	0	0	0	0	0	0	0	0	0			0			0	0	0	0
3d	POK	none	1	0	0			0			0			0			0			0	2	0	0
3d	POK	POTS			0			0			0			0			0	4	0	0			0
3d	POK	TR2	0	0	0	0	0	0			0			0			0	5	0	0			0
3d	RAJ	none	13	0	0	20	0	0	18	0	0	8	0	0	8	0	0			0	10	0	0
3d	RJG	none			0			0			0			0			0			0			0
3d	SCE	DREDGE	266	0	0	186	0	0	82	0	0	49	0	0	735	0	0	49	0	0	121	0	0
3d	SCE	LL1			0			0	0	0	0	0	0	0	0	0	0			0	0	0	0
3d	SCE	none	203	0	0	171	0	0	224	0	0	207	0	0	216	0	0	6	0	0	247	0	0
3d	SCE	OTTER			0			0			0			0			0	2	0	0			0
3d	SCE	POTS	14	0	0	6	0	0	0	0	0	3	0	0	8	0	0	282	0	0	3	0	0
3d	SCE	TR2	0	0	0			0			0			0			0	109	0	0	1	0	0
3d	SCR	none			0			0			0	5	0	0	0	0	0	13	0	0	11	0	0
3d	SCR	POTS			0			0	1	0	0	1	0	0	2	0	0	2	0	0	3	0	0
3d	SCR	TR2			0			0			0			0			0	1	0	0			0
3d	SOL	none	0	0	0			0			0			0	2	0	0			0	1	0	0
3d	SOL	OTTER			0	0	0	0			0			0			0			0			0
3d	SOL	POTS	0	0	0			0			0			0			0			0			0
3d	SOL	TR2			0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
3d	WHG	none	1	0	0			0			0			0	0	0	0			0			0
3d	WHG	OTTER			0	0	0	0			0			0			0			0			0
3d	WHG	POTS	4	0	0	0	0	0			0			0	0	0	0	0	0	0			0
3d	WHG	TR1			0	1	0	0	0	0	0			0	0	0	0			0			0
3d	WHG	TR2	2	0	0	2	0	0	1	0	0	0	0	0	1	0	0			0			0

6.5.7. Significance of Unregulated Gears and Vessels <10m in management area 3d/2d: West of Scotland

Section 6.5.5 showed that the majority of unregulated effort by vessels > 10m involved use of dredges or deployment of pots as well as the pelagic sector. The section also showed how the unregulated gears landed very small quantities of cod, plaice and sole. Although it must be borne in mind that information is not available about discards from these gears it is probable their significance in terms of catch of cod, plaice and sole is low.

Section 6.5.6 outlined available information on landings by vessels < 10m west of Scotland. Again recorded landings of cod, plaice and sole are very low and the same conclusion of low significance in terms of catch of cod, plaice and sole applies. Edible crabs, *Nephrops* and scallops were found to be the only species landed in any significant quantity. Much of the Nephrops and crab catch comes from the creel fishery operating on the west coast while scallops are caught by dredges.

Table 6.5.7.1 West of Scotland. Landings (tonnes) of cod, plaice and sole in 2010 by vessels < 10m and by unregulated gears compared to overall landings recorded in the area.

	Cod	Plaice	Sole
Total landings in area	212	54	23
Total landings from vessels < 10m	0	2	1
Total landings (unregulated)	1	0	0

6.5.8. Spatial Distribution of Effective Effort in management area 3d: West of Scotland

Spatial figures of effort for area 3d concentrate on those categories identified as significant in terms of recorded effort (see sections 6.5.1 and 6.5.5) and in terms of catches of cod (section 6.5.2). From section 6.5.2 catches of plaice and sole are shown to be small for all categories in the west of Scotland area and these species were not considered when deciding on categories to present here. Figures use a common scale across years for a given category (e.g. TR1) but scales are unique to each category such that the colours assigned to statistical rectangles for category TR1 can not be compared directly to those assigned for category TR2 say. Figures are based on absolute values. This is after data values across all years have been combined for that category. Zero values are removed first.

TR1 (Figure 6.5.8.1) – Effort is greatest in the north of the area with a distinct line of high effort in statistical rectangles straddling or close to the shelf edge. At the start of the time series a rectangle in the far south east of the area (mouth of the Clyde) had one of the highest recorded levels of effort. This area was the location for a specific cod fishery now subject to seasonal closures. The reduction in overall effort within this gear category is clear.

TR2 (Figure 6.5.8.2) – It can be seen that vessels using gear in the TR2 category primarily belong to coastal fisheries fishing on areas of mud. Highest effort is consistently just north of the boundary between management areas 3d and 3c (mouth of the Clyde). Remaining important rectangles are adjacent to the Scottish mainland, in particular between the Scottish mainland and the Outer Hebrides (known as the north and south Minches). The time series shows a contraction of effort in towards these areas of greatest activity.

LL1 (Figure 6.5.8.3) – There is a concentration of effort along the continental shelf edge throughout the time series.

GN1 (Figure 6.5.8.4) – Overall effort recorded for this category is low but LPUE of cod is currently the highest behind the TR gears. Until 2005 effort generally took place offshore and was split between an area in the north west of ICES division VIa and an area to the west of Ireland. Subsequently effort shifted until in 2008 there appeared to be a new concentration of effort in the north of area VIa but now located on the continental shelf edge.

The following are unregulated gear types but given the importance of unregulated gear effort relative to regulated gear effort (see Figure 6.5.1.5) they are shown to provide background information on the three unregulated gear types with highest effort.

PEL_TRAWL: (Figure 6.5.8.5) – Primarily an offshore fishery, (targeting herring), between 2003 and 2005 greatest effort was expended in the far north east corner of area VIa. As well as overall effort deceasing towards 2010 the concentration of effort in the far north east has ceased such that highest effort was found just north west of Ireland in 2010.

POTS (Figure 6.5.8.6) – Vessels using pots target Nephrops and edible crabs west of Scotland and effort is concentrated in coastal waters of Scotland from the southern border of area VIa north as far as the North Minch. There is no indication of a spatial shift in effort or of a change in overall effort.

DREDGE (Figure 6.5.8.7) – West of Scotland dredge fishing is used to catch scallops. Greatest effort seems to have shifted from the South Minch area to coastal areas further south (including the Clyde).

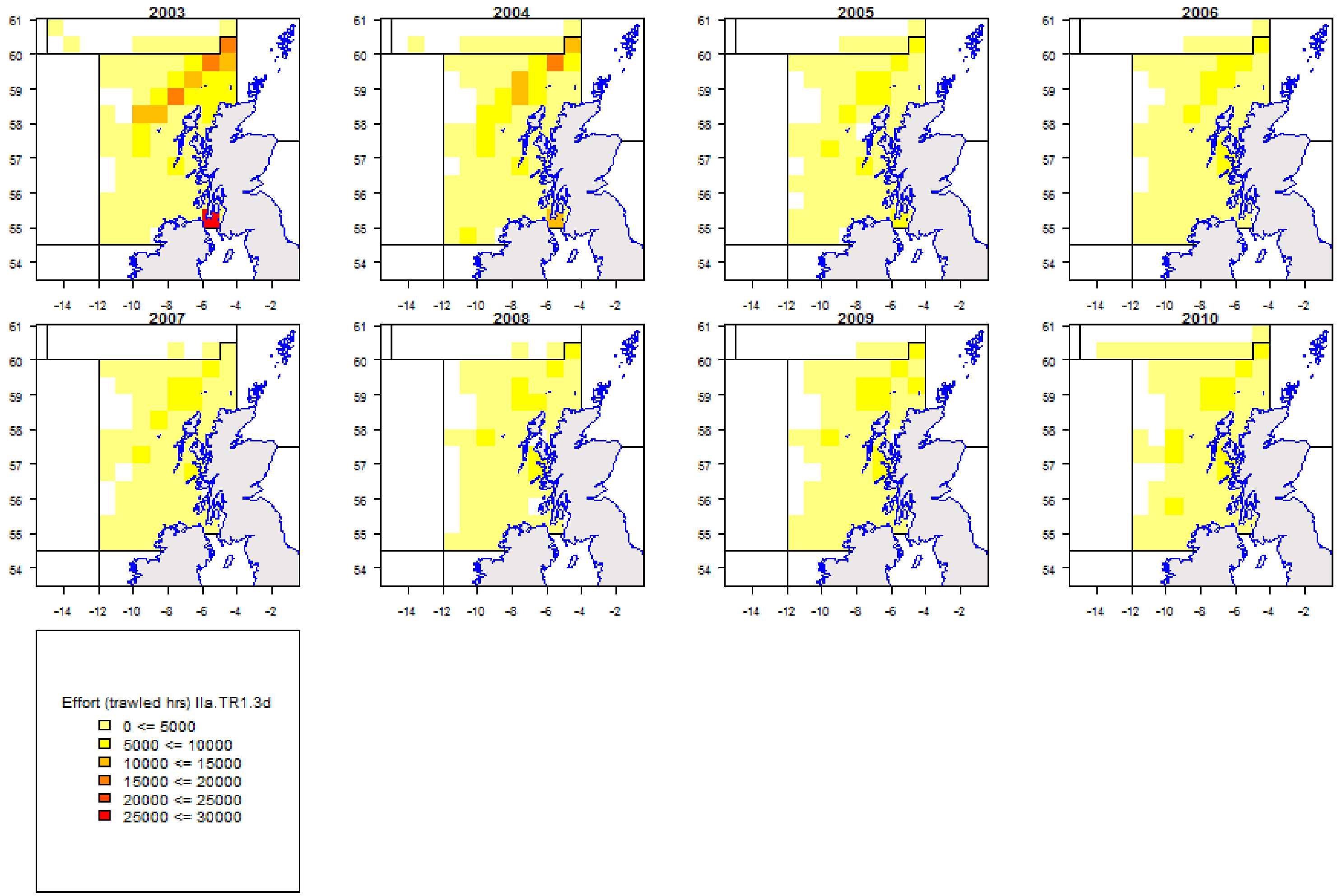


Figure 6.5.8.1 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for TR1, 2003-2010.

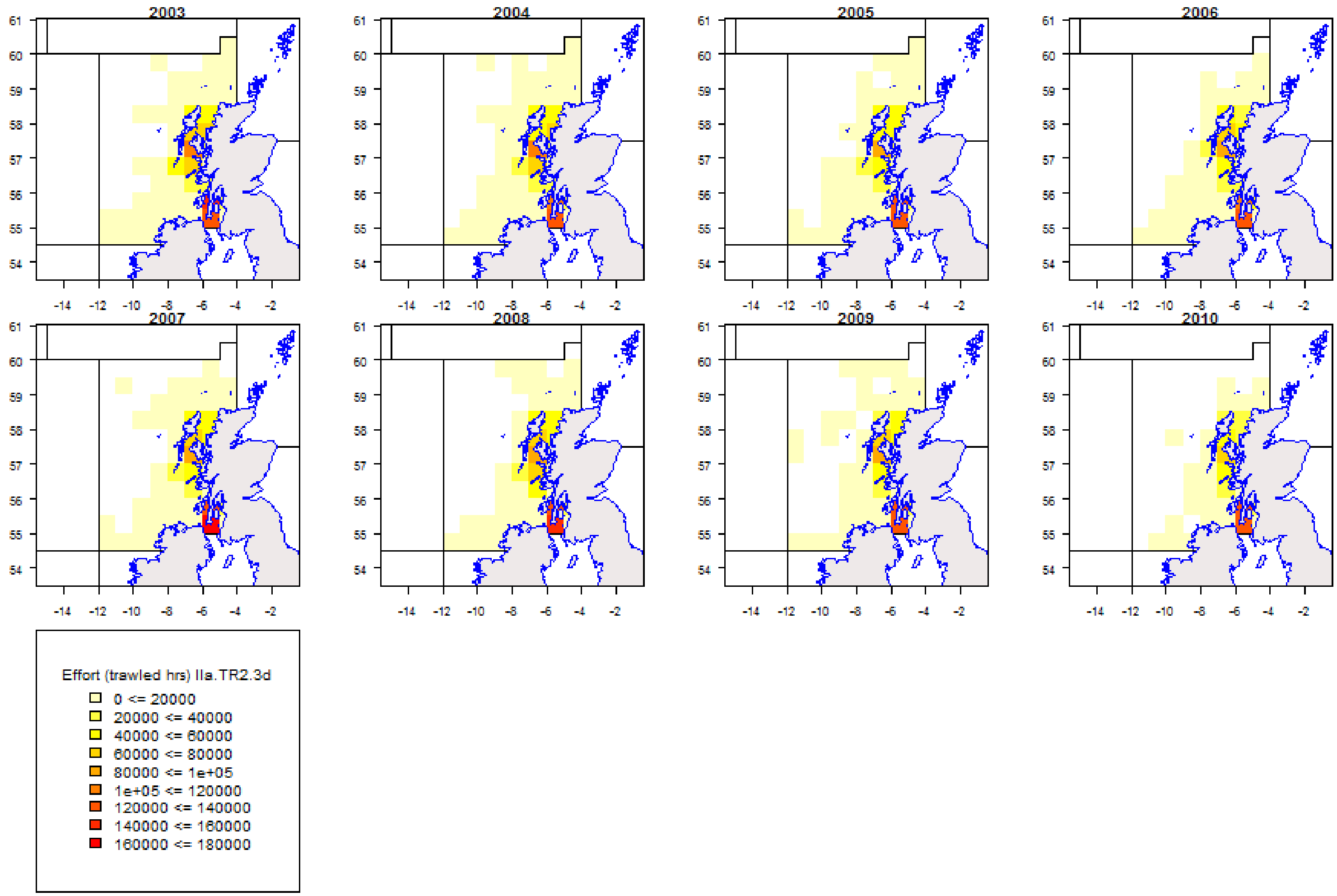


Figure 6.5.8.2 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for TR2, 2003-2010.

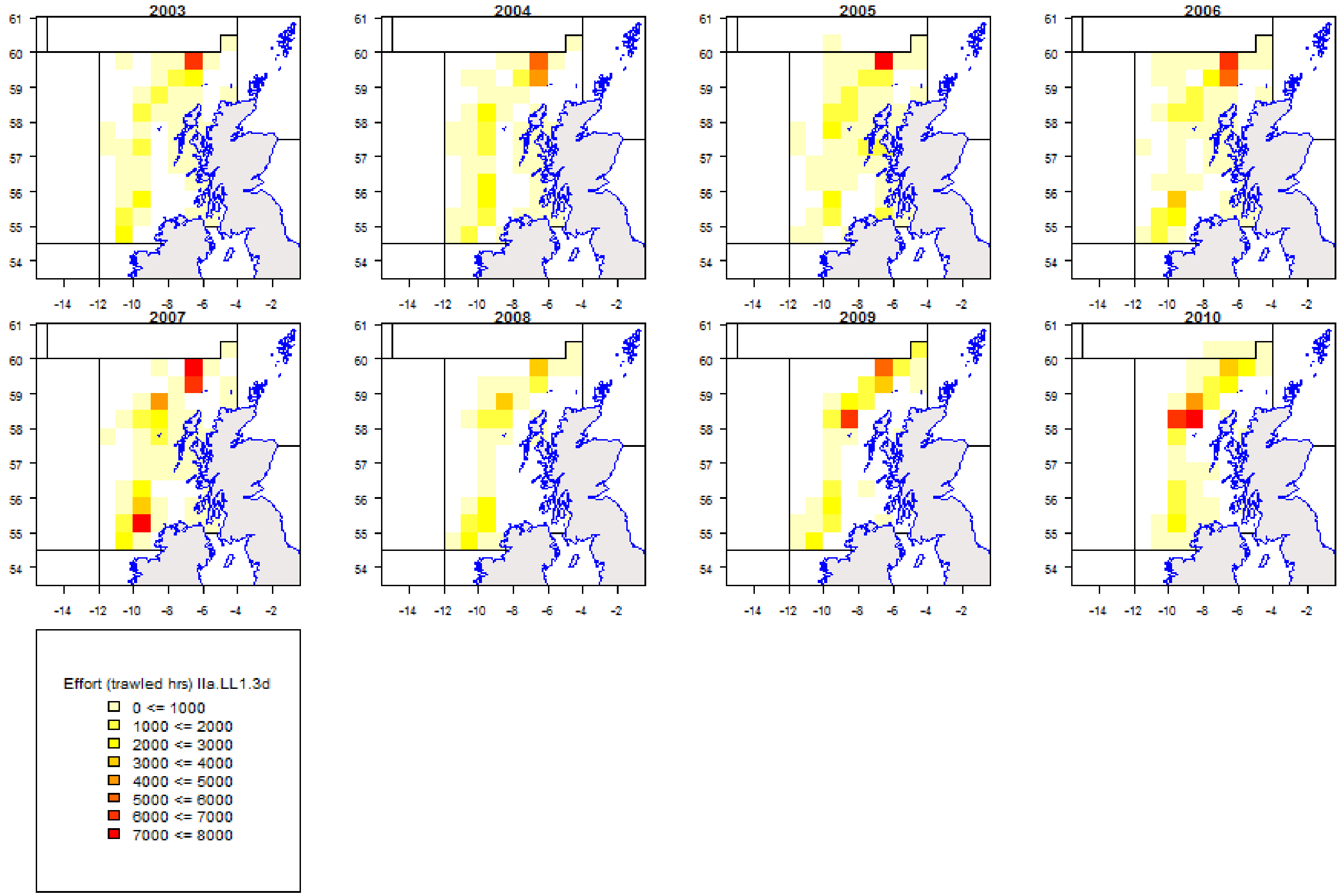


Figure 6.5.8.3 West of Scotland. Effort (hours) by ICES statistical rectangle for LL1, 2003-2010.

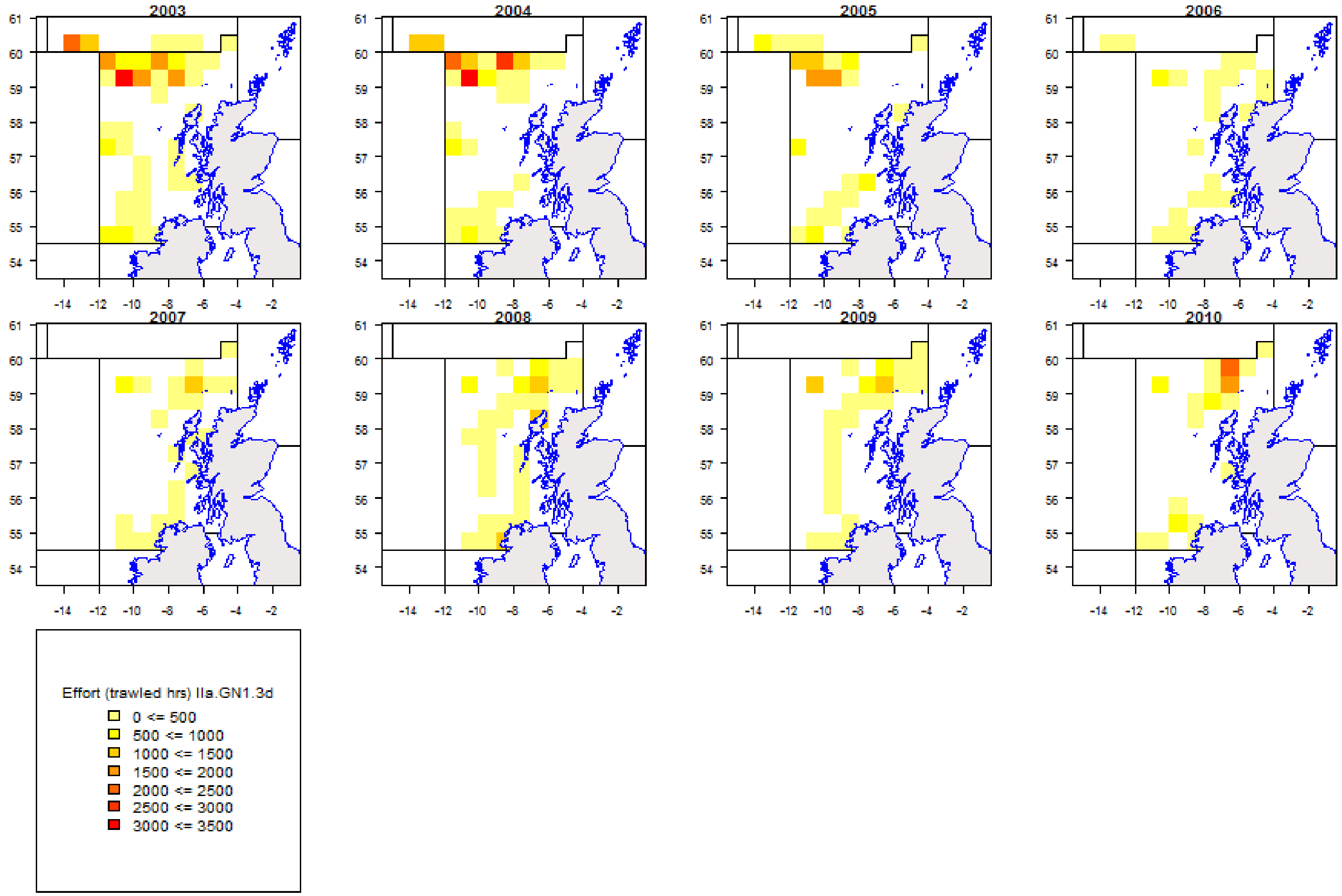


Figure 6.5.8.4 West of Scotland. Effort (hours) by ICES statistical rectangle for GN1, 2003-2010.

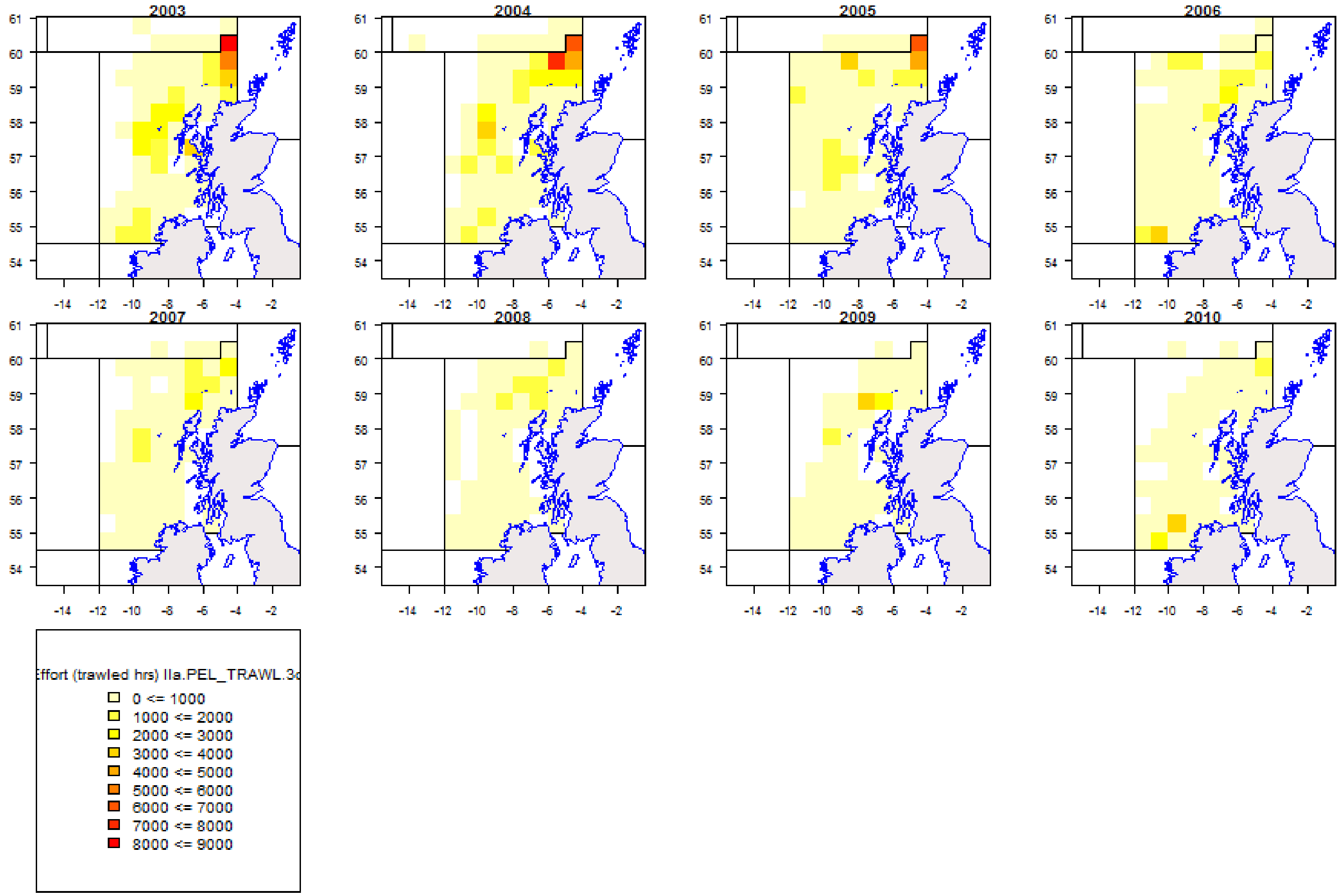


Figure 6.5.8.4 West of Scotland. Effort (hours) by ICES statistical rectangle for unregulated gear PELAGIC TRAWL, 2003-2010

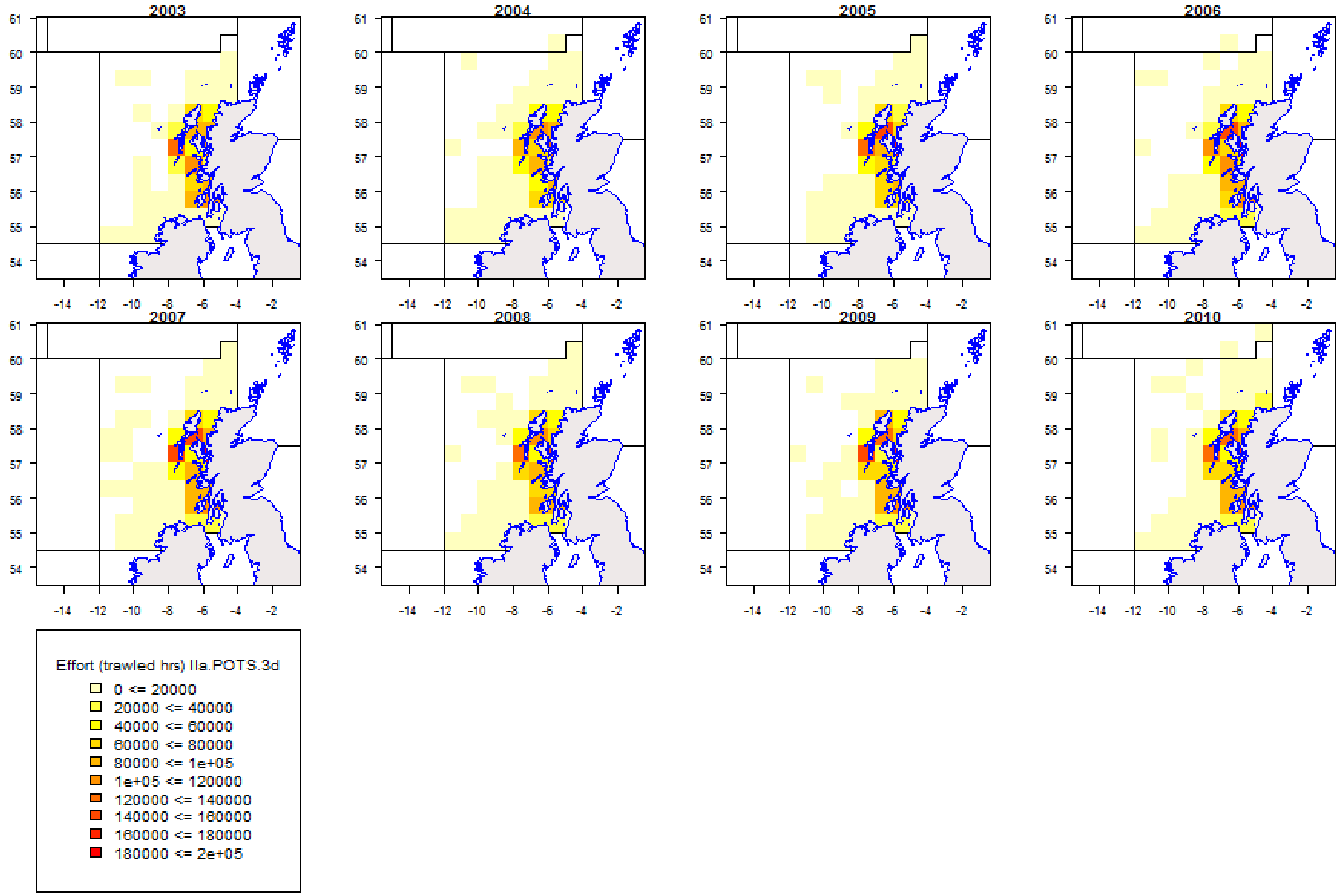


Figure 6.5.8.4 West of Scotland. Effort (hours) by ICES statistical rectangle for unregulated gear POTS, 2003-2010

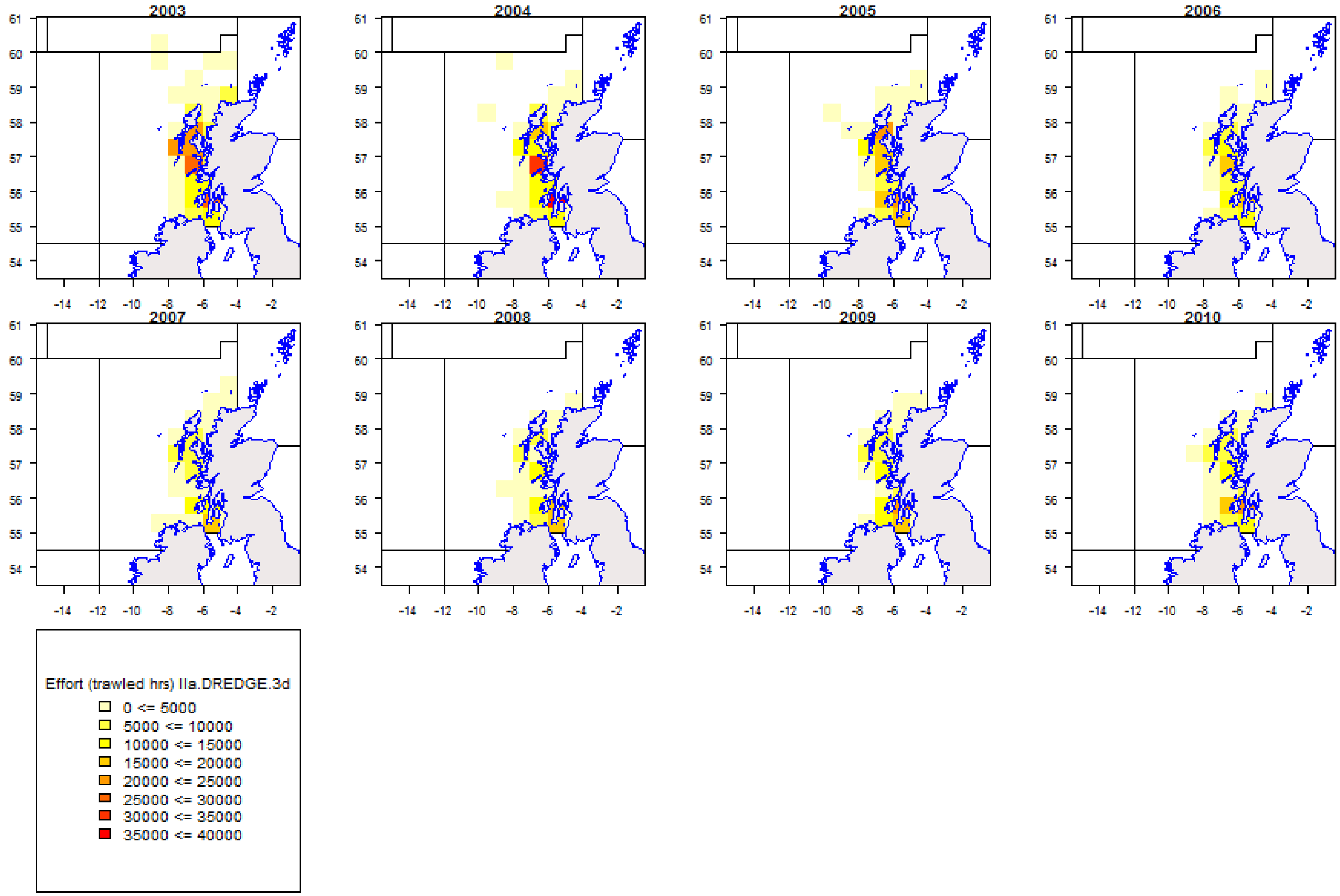


Figure 6.5.8.4 West of Scotland. Effort (hours) by ICES statistical rectangle for unregulated gear DREDGE, 2003-2010

6.5.9. Fully documented fisheries in management area 3d: West of Scotland

There is no specific provision for fully documented fisheries west of Scotland but some vessels participating in the Scottish trail scheme fished in area 3d. The effort involved in the fully documented fishery was using the TR1 gear and represented 5.4% of Scottish TR1 effort and 1.9% of overall TR1 effort. In turn this represented 0.5% of all fishing effort west of Scotland.

Catches of cod from vessels taking part in the fully documented fisheries scheme amounted to 11 tonnes. This represented a little under 2% of the cod catch from TR1 trawls and just less than 1% of overall cod catch from area 3d.

Table 6.5.9.1 West of Scotland. Nominal effort (kW*days at sea) in 2010 for fully documented fisheries as introduced by Coun. Reg. 23/2010 by nation and gear type. a) kW*days of the fully documented fisheries; b) Overall effort including fully documented fisheries; c) Fully documented fishery as % of effort for nation-fishery combination, fishery, national effort and all effort within area 3d.

a)

COUNTRY	DREDGE	GN1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	
SCO									126775		126775
Grand Total									126775		126775

b)

COUNTRY	DREDGE	GN1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	
BEL										1176	1176
DEN											
ENG	7304	2540					425610	199482	14062	14802	663800
FRA		294925	189072				233392		3469228		4186617
GBJ											
GER		36132					367736	63187	6957		474012
IOM	8010										8010
IRL		793	3272	1542	22552		1478548	659424	813886	11876	2991893
LIT											
NED							1564318				1564318
NIR	25820				388	32000	146558	181994	23860	874396	1285016
SCO	961636		723065	98727	75630	21255	1505258	2378183	2360108	3786407	11910269
Grand Total	1002770	334390	915409	100269	98570	53255	5721420	3482270	6688101	4688657	23085111

c)

	DREDGE	GN1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	
SCO	0.0%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	1.1%
0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.5%

Table 6.5.9.2 West of Scotland. Catches of cod (tonnes) in 2010 for fully documented fisheries as introduced by Coun. Reg. 23/2010 by nation and gear type. a) Catches of the fully documented fisheries; b) Overall catches including fully documented fisheries; c) Fully documented fishery catches as % of cod catches for nation-fishery combination, fishery, national catches over all gears and all cod catches within area 3d.

a)

COUNTRY	BT1	BT2	DEM_SEINE	DREDGE	GN1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	
SCO												11		11
Grand Total												11		11

b)

COUNTRY	BT1	BT2	DEM_SEINE	DREDGE	GN1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	
ENG		0			0	0						2	0	2
FRA					3	0			0			180	0	183
GER												0		0
IOM													0	0
IRL					0	0	0	0		1	0	201	0	202
NIR				0				0				270	1	271
SCO	0		0	0		0		0			0	573	22	595
Grand Total	0	0	0	0	3	0	0	0	0	1	0	1226	23	1253

c)

	BT1	BT2	DEM_SEINE	DREDGE	GN1	LL1	none	OTTER	PEL_SEINE	PEL_TRAWL	POTS	TR1	TR2	
SCO	--	--	--	--	--	--	--	--	--	--	--	1.9%	0.0%	1.8%
Grand Total	--	--	--	--	0.0%	--	--	--	--	0.0%	--	0.9%	0.0%	0.9%

7. REVIEW OF ANNEX IIB OF REGULATION 53/2010 IN THE CONTEXT OF THE RECOVERY PLAN FOR SOUTHERN HAKE AND *NEPHROPS* (REGULATION 2166/2005)

7.1. General considerations regarding the derogations and special conditions

STECF-EWG considers that Annex IIB of Council Reg. 53/2010 represents a fleet specific effort management regime which supports the southern hake and Nephrops recovery plan (Council Reg. 2166/2005). Annex IIB excludes the Gulf of Cádiz although this area is included in the recovery plan regulation (EC Reg 2166/2005) and is part of the definition of the stock area of southern hake and Iberian Nephrops.

STECF-EWG notes that the classification of the trawl mesh size ≥32mm in Annex IIB mixes two clearly defined Portuguese fisheries. One fishery targets demersal fish species with mesh size 65-69mm, and the other targets crustaceans using two different mesh sizes (shrimps with mesh size 55-59mm and Nephrops with mesh size ≥70mm) with different licenses, operating in different fishing grounds and depth ranges. A clear identification of these mesh sizes in the effort regulation may provide more focused and efficient effort management.

STECF-EWG notes that under the gears group indicated in point 1 of the Annex IIB there is a mixture of 10 different Spanish metiers: "baca", "jurelera", pair bottom trawl (PTB), "volanta", "rasco", "*LLS-COE", "LLS-HKE", "LLS-POL", ("LLS-BSS") and "LLS-MIX".*

Otter bottom trawl, with cod end mesh size of 65 mm, a vertical opening of 1.2-1.5 m and a wingspread of 22-25 m (metier "baca") targets demersal species while the same gear with a vertical opening of 5-5.5 m and wingspread of 18-20 m (metier "jurelera") targets horse mackerel and other pelagics (Fonseca et al., 2000).

PTB, with cod end mesh size between 45-55 mm (Fonseca et al., 2000), vertical opening of 25 m and a wingspread of 65 m, targets blue whiting (69% of the total catches) and hake (IBERMIX, 2007).

The gillnet fleet is divided in metier "volanta", with mesh size of 90 mm operating in depths between 100 and 400 and targeting hake and metier "rasco", with mesh size of 280 mm operating in depths between 100-800 m and catching anglerfish.

The longline fleet is divided by targets species: conger (metier "*LLS-COE"), hake ("LLS-HKE"), pollack ("LLS-POL"), seabass ("LLS-BSS*") and *mixed fishery ("LLS-MIX")*. The metier "LLS-HKE" represents only the 15% of the longline effort and is the only fishery targeting large hake of breeding size (IBERMIX, 2007).

STECF-EWG considers that the use of fishing days (or kW*days) to manage effort of static gears such as gillnets and longlines is a very poor approximation of the effective effort and thus may put at risk the management goals. A possible way to improve the impact of the effort management towards an effective reduction in fishing mortality of static gears could be to enforce continuous closed periods so that fishermen will have to bring their gear ashore and stop fishing during certain periods.

Annex IIB of Council Reg. 53/2010 sets the maximum number of days the fishing vessels are allowed to be present in the area carrying the specified regulated gears. Special conditions are applied to vessels landing less than 5 tons of hake or less than 2.5 tons of

Norway lobster in the year 2007 or 2008. These special conditions previously referred as IIB72ab according to their numbering in the regulation (Annex IIB, point 7.2 a and b of previous regulations) are now updated to IIB52ab in the 2010 regulation.

The following Table 7.1.1 lists the historic developments of days at sea by vessel and derogations.

Table 7.1.1 Historic trends in days at sea by vessel specified in the Council Regulations since 2005.

Annex	AREA	AREAREG GEAR	SPECON (*)	2003	2004	2005	2006	2007	2008	2009	2010
IIB	8c9a	3a former 3ai and 3aii	none			264	240	216	194	175	158
IIB	8c9a	3a former 3ai and 3aii	IIB52ab			365	365	365	365	365	365
IIB	8c9a	3ai deleted	none			264	240				
IIB	8c9a	3ai deleted	IIB52ab			365	365				
IIB	8c9a	3aii deleted	none			264	240				
IIB	8c9a	3aii deleted	IIB52ab			365	365				
IIB	8c9a	3b former 3bi and 3bii	none			264	240	216	194	175	158
IIB	8c9a	3b former 3bi and 3bii	IIB52a			365	365	365	365	365	365
IIB	8c9a	3bi deleted	none			264	240				
IIB	8c9a	3bi deleted	IIB52a			365	365				
IIB	8c9a	3bii deleted	none			264	240				
IIB	8c9a	3bii deleted	IIB52a			365	365				
IIB	8c9a	3c	none			264	240	216	194	175	158
IIB	8c9a	3c	IIB52a			365	365	365	365	365	365

(*) SPECON IIB52ab and IIB52a corresponds to IIB72ab and IIB72a of the regulations prior to 2010

7.2. Trend in effort 2000-2008 by derogation and by Member State

Effort information in kW*days, GT*days and number of vessels by quarter, gear, mesh size range, area and special condition was provided by Portugal, France, England, Scotland, Germany, Ireland and Netherlands in the Divisions 8c and 9a for the years 2000-2010. Spain did not provide any data and the values presented in this report, corresponding to the period 2002-2009, are those submitted in 2010.

According to Annex IIB of Regulation 53/2010, in the context of the recovery plan for southern hake and Nephrops stocks, fishing vessels with overall length above 10 meters that have trawl nets with mesh sizes >32 mm or gillnets > 60 mm or bottom longlines may be present within the area for a maximum of 158 days during 2010 (Table I of the Annex II B).

If, during 2007 or 2008 these vessels fished less than 5 tonnes of hake and 2.5 of Nephrops per year, special conditions are applied and they are not covered by the effort limitation, but are obliged not to exceed the same amounts in 2010. The reference period for previous regulations was 2001-2003.

The available effort data in terms of kW*days by Member State is given in Table 7.2.1. Information on trends in GTdays will be made available on the website:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

In addition to the 2007 regulation defined gear types “3a” (bottom trawler mesh size ≥32 mm), “3b” (gillnet ≥60 mm), “3c” (bottom longline) and the undefined (“none”), the tables include trammel nets under the coding “3t”, as they were found to contribute significantly to the static effort deployed.

Table 7.2.1 Trend in nominal effort (kW*days at sea) by Member State and existing derogations given in Table 1 of Annex IIB (Coun. Reg. 53/2010), 2000-2010. Derogations are sorted by gear, special condition (SPECON) and country. Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. Note that the gear type “3t” denotes the non-regulated effort for trammel gear with all mesh sizes.

ANNEX	AREA	REG_GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IIb	8c-9a	3a	IIB52AB	POR	0	0	7621	2459587	1657564	1609414	560066	186292	195742	314693	310340
IIb	8c-9a	3a	IIB52AB	SPN	0	0	2109760	1820929	3051855	2677605	2420208	2458721	2478225	2403446	0
IIb	8c-9a	3a	none	ENG	0	0	0	0	0	1277	0	0	0	0	0
IIb	8c-9a	3a	none	FRA	63277	123663	484849	120552	110098	198178	345256	274429	315954	315954	47904
IIb	8c-9a	3a	none	IRL	0	0	0	4208	0	0	1612	0	0	0	164
IIb	8c-9a	3a	none	POR	3808432	1807966	1741444	5077895	5074403	4425695	6137862	8941196	8299895	7380318	6493382
IIb	8c-9a	3a	none	SPN	0	0	9822108	15456694	14344840	11072135	11473544	9902350	7975346	7959428	0
IIb	8c-9a	3b	IIB52AB	POR	0	0	5884	35022	2695	51269	116027	152925	176029	276056	248338
IIb	8c-9a	3b	IIB52AB	SPN	0	0	671679	662947	865145	1033742	916120	1056900	1330193	1668152	0
IIb	8c-9a	3b	none	ENG	0	0	0	0	0	0	26652	1984	0	0	0
IIb	8c-9a	3b	none	FRA	4723	4750	24598	5762	28023	97700	69478	128595	296765	296765	114202
IIb	8c-9a	3b	none	POR	151503	90812	162118	88641	32273	144697	231204	816228	886822	763806	680987
IIb	8c-9a	3b	none	SCO	0	0	0	0	0	0	3234	0	0	0	0
IIb	8c-9a	3b	none	SPN	0	0	438463	450978	684167	787527	916038	1010060	1195943	1480125	0
IIb	8c-9a	3c	IIB52AB	POR	45446	10923	20594	328631	280951	572385	869687	841563	750091	864313	844144
IIb	8c-9a	3c	IIB52AB	SPN	0	0	591039	621801	692039	686974	755191	846255	897264	1099242	0
IIb	8c-9a	3c	none	ENG	0	0	0	8853	0	0	4928	0	0	0	0
IIb	8c-9a	3c	none	FRA	1738	0	3312	3318	3972	2094	588	700	40052	40052	83794
IIb	8c-9a	3c	none	IRL	0	0	0	0	0	0	1684	2472	0	0	0
IIb	8c-9a	3c	none	POR	0	544	0	56188	33808	39774	95715	149000	139305	111767	91062
IIb	8c-9a	3c	none	SCO	0	0	0	0	0	0	0	0	0	0	2323
IIb	8c-9a	3c	none	SPN	0	0	310392	344686	383472	545271	830548	522362	521613	728602	0
IIb	8c-9a	3t	none	FRA	4108	0	23894	3977	525	0	1878	0	2823	2823	5048
IIb	8c-9a	3t	none	POR	74911	79822	89495	74729	40252	253707	525524	1252867	1026614	1264013	1437577
IIb	8c-9a	3t	none	SPN	0	0	461705	438995	736892	955031	742397	716707	917963	932788	0
IIb	8c-9a	none	none	ENG	0	0	0	0	0	0	3136	0	0	0	0
IIb	8c-9a	none	none	FRA	85431	159563	1216983	224468	97130	125835	318711	317890	44551	44551	47003
IIb	8c-9a	none	none	GER	0	0	0	0	0	0	0	15685	23373	6174	7272
IIb	8c-9a	none	none	IRL	0	1585	4281	11686	0	0	6020	0	0	0	0
IIb	8c-9a	none	none	POR	0	0	0	11726	5402	78981	159803	304567	440799	393947	370203
IIb	8c-9a	none	none	SPN	0	0	18346437	24809378	16299264	15443521	13662008	14825151	13411326	15960434	0

Differences between the 2010 and 2011 data submissions are given in Table 7.2.2. Spain did not submit any data in 2011. Questioned by the group, Portugal attributed the differences between the data submitted in 2010 and 2011 to a different criterion to allocate effort to areas and gears, used to prevent the double allocation of the same data. The application of this criterion resulted in a reduction of effort in some areas/gears. Some bugs were also corrected in the allocation routines.

Table 7.2.2 Differences in effort data submissions between 2010 and 2011 by Member State.

REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
3a	IIB52ab	POR	0	0	-1342	-1211166	-1565479	-2006695	-553197	-1764	-934	1458
3a	IIB52ab	SPN	0	0	-2109760	-1820929	-3051855	-2677605	-2420208	-2458721	-2478225	-2403446
3a	none	ENG	0	0	0	0	0	0	0	0	0	0
3a	none	FRA	0	0	0	0	0	0	0	0	0	0
3a	none	IRL	0	0	0	0	0	0	0	0	0	0
3a	none	POR	-2304609	-1278339	-1867583	-1906185	-1586867	-2616003	-2163668	-531039	-319725	-233836
3a	none	SPN	0	0	-9822108	-15456694	-14344840	-11072135	-11473544	-9902350	-7975346	-7959428
3b	IIB52ab	POR	0	0	0	-279459	-158919	-171033	-122953	6239	-128	2695
3b	IIB52ab	SPN	0	0	-671679	-662947	-865145	-1033742	-916120	-1056900	-1330193	-1668152
3b	none	ENG	0	0	0	0	0	0	0	0	0	0
3b	none	FRA	0	0	0	0	0	0	0	0	0	0
3b	none	POR	-192834	-284428	-251272	-492796	-440033	-731896	-382431	-6572	3318	-15260
3b	none	SCO	0	0	0	0	0	0	0	0	0	0
3b	none	SPN	0	0	-438463	-450978	-684167	-787527	-916038	-1010060	-1195943	-1480125
3c	IIB52ab	POR	-69135	-120037	-55819	-290440	-53754	-218702	198030	642949	544026	478542
3c	IIB52ab	SPN	0	0	-591039	-621801	-692039	-686974	-755191	-846255	-897264	-1099242
3c	none	ENG	0	0	0	0	0	0	0	0	0	0
3c	none	FRA	0	0	0	0	0	0	0	0	0	0
3c	none	IRL	0	0	0	0	0	0	0	0	0	0
3c	none	POR	0	-11480	0	-41609	-7383	-13050	18892	63119	40278	30061
3c	none	SPN	0	0	-310392	-344686	-383472	-545271	-830548	-522362	-521613	-728602
3t	none	FRA	0	0	0	0	0	0	0	0	0	0
3t	none	POR	-49445	-47777	-65056	-480591	-755285	-890724	-854622	-148323	-206660	-152561
3t	none	SPN	0	0	-461705	-438995	-736892	-955031	-742397	-716707	-917963	-932788
none	none	ENG	0	0	0	0	0	0	0	0	0	0
none	none	FRA	0	0	0	0	0	0	0	0	0	0
none	none	GER	0	0	0	0	0	0	0	0	0	0
none	none	IRL	0	0	0	0	0	0	0	0	0	0
none	none	POR	0	0	0	-148172	-133610	-226424	-130859	-34294	-54949	-47208
none	none	SPN	0	0	-18346437	-24809378	-16299264	-15443521	-13662008	-14825151	-13411326	-15960434

Figure 7.2.1 shows effort trends for Portugal and Spain, the main players in the area. The data submitted by the member states for the years 2000-2004, initial period of the time series, do not seem realistic as several gears present very low effort data and/or gaps. Spanish data for 2010 were not available. See section 7.9 for more details in data quality provided by Member States. Spanish unregulated gears (SPN-NONE), Spanish and Portuguese regulated trawlers (SPN-3A and POR-3A, respectively) are the gears deploying more effort in the area (2007-2009 average), 34%, 20% and 19% respectively.

Spanish unregulated gears effort (SPN-NONE, Fig. 7.2.1) has been stable in the period 2005-2009. The effort of trawlers (3A) under effort restrictions (continuous line) is decreasing since 2003 in the case of Spain and since 2007 in the case of Portugal (SPN and POR 3A continuous line). The effort of trawlers (3A) without effort restrictions (IIB52AB, dashed line) has been stable since 2006 in the case of Spain and since 2007 in the Portuguese case.

The effort of the Spanish regulated gillnet (SPN-3B) (3%) has slightly increased in most recent years, while the effort of the Spanish regulated longline and Portuguese regulated gillnet and longline (1%, 2% and 0.3%, respectively) has been stable.

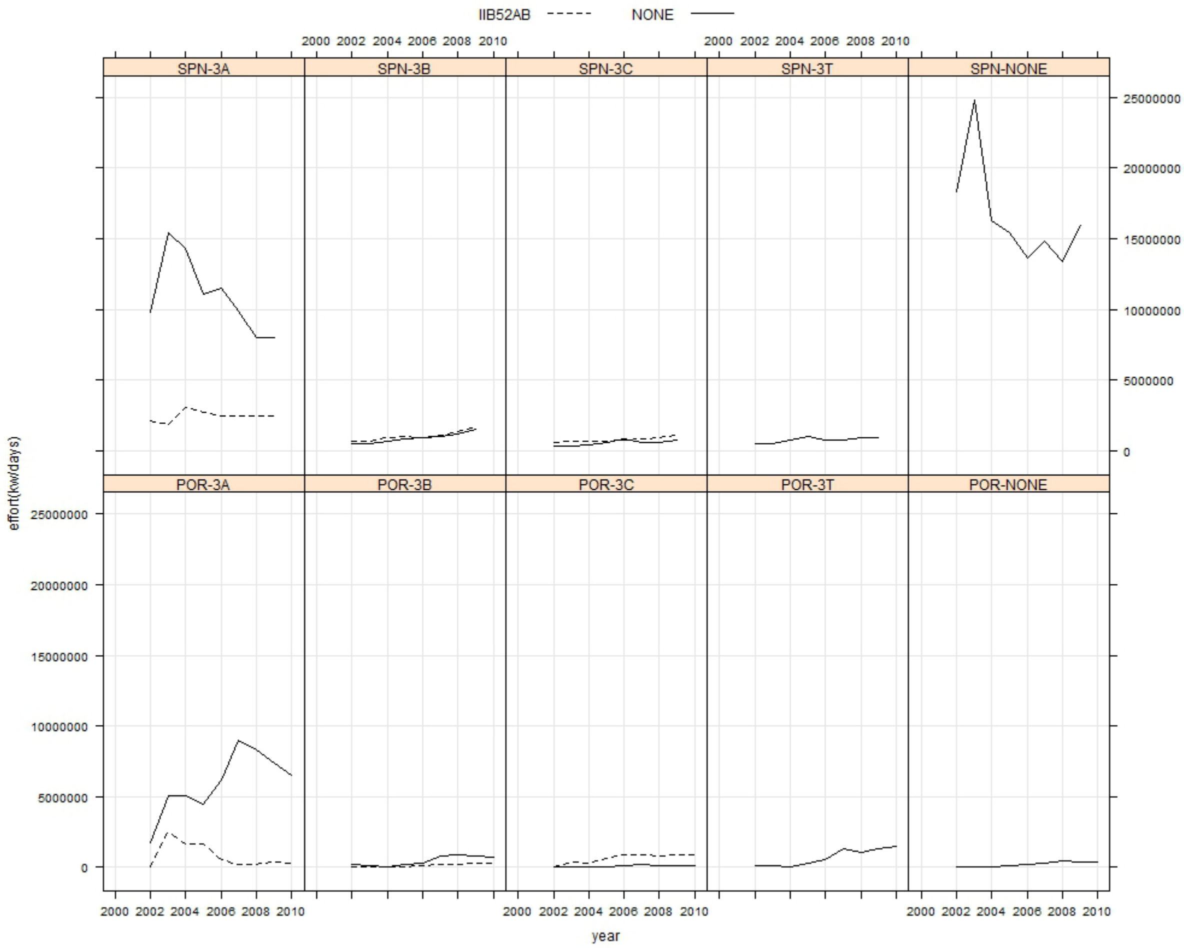


Fig. 7.2.1 Effort trends by gear type and Member State.

Figure 7.2.2 identifies the Spanish unregulated gears (SPN-NONE) (2007-2009 average), “None” information (30%) corresponds to tuna and mackerel gears (troll and hand lines), while gillnet and otter information for SPN-NONE (6% and 1% respectively) are from unregulated or not identified mesh sizes.

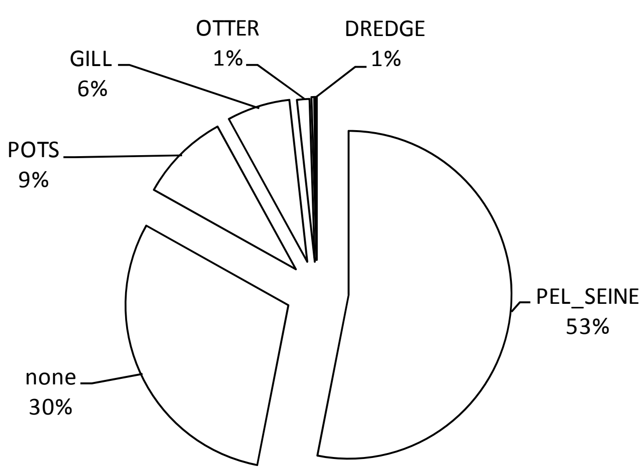


Figure 7.2.2.- Spanish non regulated gears (SPN-NONE): effort (KW*day) by gear (2007-2009 average). “none” gears (30%) are composed by tuna and mackerel gears (troll and hand lines).

The Table 7.2.3 lists the trend in effort by derogation since 2000 in terms of kW*days at sea, GT*days at sea and number of vessel, respectively are available on the web. Due to lack of Spanish data, nothing can be concluded on effort changes in the last year.

Table 7.2.3 Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2010. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. Note that the gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes.

ANNEX	AREA	REG_GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IIb	8c-9a	3a	IIB52ab			2,117,381	4,280,516	4,709,419	4,287,019	2,980,274	2,645,013	2,673,967	2,718,139	310,340
IIb	8c-9a	3a	none	3,871,709	1,931,629	12,048,401	20,659,349	19,529,341	15,697,285	17,958,274	19,117,975	16,591,195	15,655,700	6,541,450
IIb	8c-9a	3b	IIB52ab			677,563	697,969	867,840	1,085,011	1,032,147	1,209,825	1,506,222	1,944,208	248,338
IIb	8c-9a	3b	none	156,226	95,562	625,179	545,381	744,463	1,029,924	1,246,606	1,956,867	2,379,530	2,540,696	795,189
IIb	8c-9a	3c	IIB52ab	45,446	10,923	611,633	950,432	972,990	1,259,359	1,624,878	1,687,818	1,647,355	1,963,555	844,144
IIb	8c-9a	3c	none	1,738	544	313,704	413,045	421,252	587,139	933,463	674,534	700,970	880,421	177,179
IIb	8c-9a	3t	none	79,019	79,822	575,094	517,701	777,669	1,208,738	1,269,799	1,969,574	1,947,400	2,199,624	1,442,625
IIb	8c-9a	none	none	85,431	161,148	19,567,701	25,057,258	16,401,796	15,648,337	14,149,678	15,463,293	13,920,049	16,405,106	424,478

Most of the deployed effort in the area (46%) is by trawl, and most of this (86%) is under effort control. Between 2007 and 2009 passive gears (3b, 3c and 3t) accounted for approximately 19% of all effort. However, such results have a limited meaning regarding the fishing pressure executed by these fleets, once that the unit kW*day does not take into account the number of hooks and area of the nets and hence it is a poor indicator of the fishing activity. In 2007-2009 about 40% of the effort was assigned to other gears than the regulated ones (“3t” and “none” gears), of which trammel nets (“3t”) contribute 5% to the overall effort deployed. Most of this effort is deployed by gears that do not target hake, Nephrops or anglerfish. Figure 7.2.3 show the effort trends by gear type in the period 2002-2009, the dashed line identifying the period before the enforcement of effort control measures. Year 2010 was not included for the reasons presented above. The effort of trawlers (3A) has decreased since 2007, while the effort of gillnets (3B) has slightly increased. The effort of longline (3C), trammel (3T) and unregulated gears (NONE) has been stable since the effort control measures were enforced.

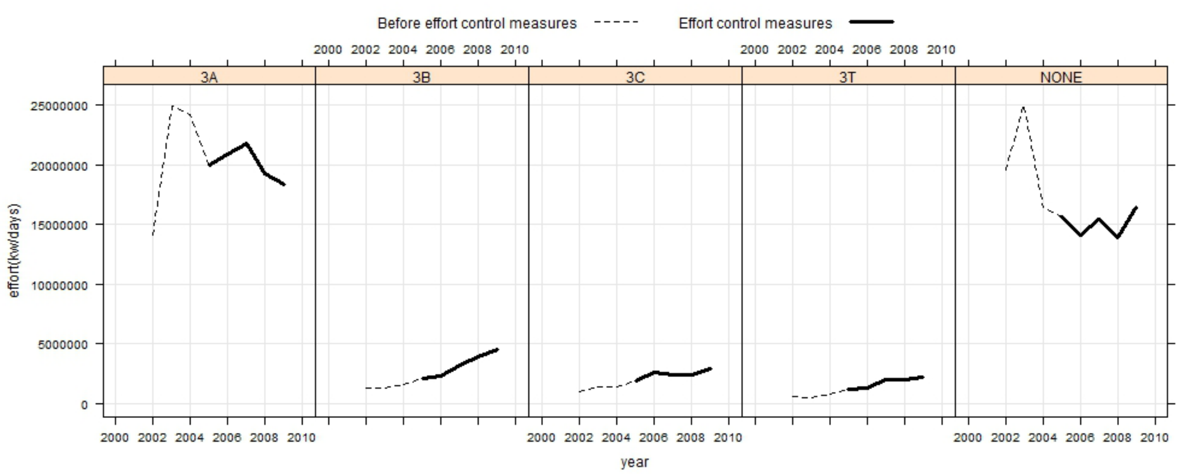


Fig. 7.2.3. Effort trends by gear type. Year 2010 point removed from the graph.

7.3. Trend in catch estimates 2003-2010 by derogation in management areas 8c and 9a

Portugal provided data on 2002-2010 landings. Spain did not provide any data, so the data used in this report 2002-2009 are the same reported last year. MS did not provide hake and anglerfish information by age because there are doubts about these species ageing (see ICES 2009 WGHMM). Numbers at age were submitted by Spain in 2010 for anchovy, blue whiting and mackerel for the period 2003-2008. Portugal did not provide age information for other species. The information provided (logbooks) cover 93% of the landings reported to ICES (WGHMM 2010) in the Spanish case, and about 76% in the Portuguese case. A part of this discrepancy is due to the landings of small scale vessels (<10m) that were not reported.

Both countries provided discard information for hake. However, the Spanish discards show unrealistic values for the years before 2009. To overcome this problem, discard ratios from ICES 2010 WGHMM report have been applied to compute the Spanish hake's discard time series.

The contributions of the individual derogations to the overall landings can be taken from Tables 7.3.1. For brevity, the following sections represent the landings and discards by derogation in weight restricted to the following species, monk (ANF), hake (HKE), Nephrops (NEP), horse mackerel (JAX), mackerel (MAC), Penaeus shrimps (PEN), rays (RAJ) and blue whiting (WHB).

Tab. 7.3.1 (I) Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: 3a) bottom trawls of mesh size ≥ 32 mm, 3b) gill-nets of mesh size ≥ 60 mm, 3c) bottom long-lines. Gear type "3t" denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type "none" contains other gears and the gears not allocated.

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	ANF	2003	3A	IIB52ab	191	0
IIB	8C-9A	ANF	2003	3A	NONE	1293	0
IIB	8C-9A	ANF	2003	3B	IIB52ab	196	0
IIB	8C-9A	ANF	2003	3B	NONE	30	0
IIB	8C-9A	ANF	2003	3C	IIB52ab	0	0
IIB	8C-9A	ANF	2003	3C	NONE	0	0
IIB	8C-9A	ANF	2003	3T	NONE	74	0
IIB	8C-9A	ANF	2003	NONE	NONE	219	0
IIB	8C-9A	ANF	2004	3A	IIB52ab	199	0
IIB	8C-9A	ANF	2004	3A	NONE	1363	0
IIB	8C-9A	ANF	2004	3B	IIB52ab	280	0
IIB	8C-9A	ANF	2004	3B	NONE	222	0
IIB	8C-9A	ANF	2004	3C	IIB52ab	1	0
IIB	8C-9A	ANF	2004	3C	NONE	4	0
IIB	8C-9A	ANF	2004	3T	NONE	182	0
IIB	8C-9A	ANF	2004	NONE	NONE	257	0
IIB	8C-9A	ANF	2005	3A	IIB52ab	249	0
IIB	8C-9A	ANF	2005	3A	NONE	1608	0
IIB	8C-9A	ANF	2005	3B	IIB52ab	507	0
IIB	8C-9A	ANF	2005	3B	NONE	408	0
IIB	8C-9A	ANF	2005	3C	IIB52ab	1	0

Table 7.3.1 continued (II).

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	ANF	2005	3C	NONE	0	0
IIB	8C-9A	ANF	2005	3T	NONE	214	0
IIB	8C-9A	ANF	2005	NONE	NONE	359	0
IIB	8C-9A	ANF	2006	3A	IIB52ab	274	0
IIB	8C-9A	ANF	2006	3A	NONE	1715	0
IIB	8C-9A	ANF	2006	3B	IIB52ab	529	0
IIB	8C-9A	ANF	2006	3B	NONE	598	0
IIB	8C-9A	ANF	2006	3C	IIB52ab	4	0
IIB	8C-9A	ANF	2006	3C	NONE	1	0
IIB	8C-9A	ANF	2006	3T	NONE	182	0
IIB	8C-9A	ANF	2006	NONE	NONE	435	0
IIB	8C-9A	ANF	2007	3A	IIB52ab	317	0
IIB	8C-9A	ANF	2007	3A	NONE	1640	0
IIB	8C-9A	ANF	2007	3B	IIB52ab	368	0
IIB	8C-9A	ANF	2007	3B	NONE	411	0
IIB	8C-9A	ANF	2007	3C	IIB52ab	3	0
IIB	8C-9A	ANF	2007	3C	NONE	15	0
IIB	8C-9A	ANF	2007	3T	NONE	241	0
IIB	8C-9A	ANF	2007	NONE	NONE	280	0
IIB	8C-9A	ANF	2008	3A	IIB52ab	332	0
IIB	8C-9A	ANF	2008	3A	NONE	1305	0
IIB	8C-9A	ANF	2008	3B	IIB52ab	401	0
IIB	8C-9A	ANF	2008	3B	NONE	392	0
IIB	8C-9A	ANF	2008	3C	IIB52ab	2	0
IIB	8C-9A	ANF	2008	3C	NONE	4	0
IIB	8C-9A	ANF	2008	3T	NONE	180	0
IIB	8C-9A	ANF	2008	NONE	NONE	217	0
IIB	8C-9A	ANF	2009	3A	IIB52ab	281	0
IIB	8C-9A	ANF	2009	3A	NONE	986	0
IIB	8C-9A	ANF	2009	3B	IIB52ab	322	0
IIB	8C-9A	ANF	2009	3B	NONE	413	0
IIB	8C-9A	ANF	2009	3C	IIB52ab	1	0
IIB	8C-9A	ANF	2009	3C	NONE	1	0
IIB	8C-9A	ANF	2009	3T	NONE	234	0
IIB	8C-9A	ANF	2009	NONE	NONE	255	0
IIB	8C-9A	ANF	2010	3A	IIB52ab	9	0
IIB	8C-9A	ANF	2010	3A	NONE	87	0
IIB	8C-9A	ANF	2010	3B	IIB52ab	18	0
IIB	8C-9A	ANF	2010	3B	NONE	6	0
IIB	8C-9A	ANF	2010	3C	IIB52ab	0	0
IIB	8C-9A	ANF	2010	3C	NONE	0	0
IIB	8C-9A	ANF	2010	3T	NONE	84	0
IIB	8C-9A	ANF	2010	NONE	NONE	3	0
IIB	8C-9A	HKE	2003	3A	IIB52ab	165	0
IIB	8C-9A	HKE	2003	3A	NONE	2043	0
IIB	8C-9A	HKE	2003	3B	IIB52ab	85	0
IIB	8C-9A	HKE	2003	3B	NONE	540	0
IIB	8C-9A	HKE	2003	3C	IIB52ab	22	0
IIB	8C-9A	HKE	2003	3C	NONE	102	0
IIB	8C-9A	HKE	2003	3T	NONE	12	0
IIB	8C-9A	HKE	2003	NONE	NONE	407	0
IIB	8C-9A	HKE	2004	3A	IIB52ab	186	27
IIB	8C-9A	HKE	2004	3A	NONE	2291	327
IIB	8C-9A	HKE	2004	3B	IIB52ab	139	0
IIB	8C-9A	HKE	2004	3B	NONE	586	0
IIB	8C-9A	HKE	2004	3C	IIB52ab	63	0
IIB	8C-9A	HKE	2004	3C	NONE	83	0
IIB	8C-9A	HKE	2004	3T	NONE	20	0
IIB	8C-9A	HKE	2004	NONE	NONE	229	1
IIB	8C-9A	HKE	2005	3A	IIB52ab	398	176
IIB	8C-9A	HKE	2005	3A	NONE	3351	911
IIB	8C-9A	HKE	2005	3B	IIB52ab	224	0
IIB	8C-9A	HKE	2005	3B	NONE	939	0
IIB	8C-9A	HKE	2005	3C	IIB52ab	134	0
IIB	8C-9A	HKE	2005	3C	NONE	141	0
IIB	8C-9A	HKE	2005	3T	NONE	77	0
IIB	8C-9A	HKE	2005	NONE	NONE	287	2
IIB	8C-9A	HKE	2006	3A	IIB52ab	1301	503

IIB	8C-9A	HKE	2006	3A	NONE	5530	2272

Table 7.3.1 continued (III).

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	HKE	2006	3B	IIB52ab	427	0
IIB	8C-9A	HKE	2006	3B	NONE	1150	0
IIB	8C-9A	HKE	2006	3C	IIB52ab	243	0
IIB	8C-9A	HKE	2006	3C	NONE	157	0
IIB	8C-9A	HKE	2006	3T	NONE	94	0
IIB	8C-9A	HKE	2006	NONE	NONE	310	22
IIB	8C-9A	HKE	2007	3A	IIB52ab	1534	232
IIB	8C-9A	HKE	2007	3A	NONE	6804	2160
IIB	8C-9A	HKE	2007	3B	IIB52ab	704	0
IIB	8C-9A	HKE	2007	3B	NONE	2186	0
IIB	8C-9A	HKE	2007	3C	IIB52ab	414	0
IIB	8C-9A	HKE	2007	3C	NONE	210	0
IIB	8C-9A	HKE	2007	3T	NONE	266	0
IIB	8C-9A	HKE	2007	NONE	NONE	455	14
IIB	8C-9A	HKE	2008	3A	IIB52ab	1873	311
IIB	8C-9A	HKE	2008	3A	NONE	7638	1899
IIB	8C-9A	HKE	2008	3B	IIB52ab	873	0
IIB	8C-9A	HKE	2008	3B	NONE	3062	0
IIB	8C-9A	HKE	2008	3C	IIB52ab	1008	0
IIB	8C-9A	HKE	2008	3C	NONE	428	0
IIB	8C-9A	HKE	2008	3T	NONE	233	0
IIB	8C-9A	HKE	2008	NONE	NONE	588	21
IIB	8C-9A	HKE	2009	3A	IIB52ab	2295	468
IIB	8C-9A	HKE	2009	3A	NONE	8265	3238
IIB	8C-9A	HKE	2009	3B	IIB52ab	937	0
IIB	8C-9A	HKE	2009	3B	NONE	3353	0
IIB	8C-9A	HKE	2009	3C	IIB52ab	1565	0
IIB	8C-9A	HKE	2009	3C	NONE	754	0
IIB	8C-9A	HKE	2009	3T	NONE	358	0
IIB	8C-9A	HKE	2009	NONE	NONE	523	25
IIB	8C-9A	HKE	2010	3A	IIB52ab	8	6
IIB	8C-9A	HKE	2010	3A	NONE	732	578
IIB	8C-9A	HKE	2010	3B	IIB52ab	73	0
IIB	8C-9A	HKE	2010	3B	NONE	586	0
IIB	8C-9A	HKE	2010	3C	IIB52ab	33	0
IIB	8C-9A	HKE	2010	3C	NONE	80	0
IIB	8C-9A	HKE	2010	3T	NONE	212	0
IIB	8C-9A	HKE	2010	NONE	NONE	5	0
IIB	8C-9A	JAX	2003	3A	IIB52ab	3656	0
IIB	8C-9A	JAX	2003	3A	NONE	16038	0
IIB	8C-9A	JAX	2003	3B	IIB52ab	42	0
IIB	8C-9A	JAX	2003	3B	NONE	36	0
IIB	8C-9A	JAX	2003	3C	IIB52ab	8	0
IIB	8C-9A	JAX	2003	3C	NONE	2	0
IIB	8C-9A	JAX	2003	3T	NONE	7	0
IIB	8C-9A	JAX	2003	NONE	NONE	14437	0
IIB	8C-9A	JAX	2004	3A	IIB52ab	5541	0
IIB	8C-9A	JAX	2004	3A	NONE	20364	0
IIB	8C-9A	JAX	2004	3B	IIB52ab	87	0
IIB	8C-9A	JAX	2004	3B	NONE	50	0
IIB	8C-9A	JAX	2004	3C	IIB52ab	5	0
IIB	8C-9A	JAX	2004	3C	NONE	3	0
IIB	8C-9A	JAX	2004	3T	NONE	9	0
IIB	8C-9A	JAX	2004	NONE	NONE	15229	0
IIB	8C-9A	JAX	2005	3A	IIB52ab	4104	0
IIB	8C-9A	JAX	2005	3A	NONE	19560	0
IIB	8C-9A	JAX	2005	3B	IIB52ab	79	0
IIB	8C-9A	JAX	2005	3B	NONE	65	0
IIB	8C-9A	JAX	2005	3C	IIB52ab	8	0
IIB	8C-9A	JAX	2005	3C	NONE	3	0
IIB	8C-9A	JAX	2005	3T	NONE	30	0
IIB	8C-9A	JAX	2005	NONE	NONE	13480	0
IIB	8C-9A	JAX	2006	3A	IIB52ab	4601	0
IIB	8C-9A	JAX	2006	3A	NONE	21511	0
IIB	8C-9A	JAX	2006	3B	IIB52ab	109	0
IIB	8C-9A	JAX	2006	3B	NONE	63	0
IIB	8C-9A	JAX	2006	3C	IIB52ab	17	0

IIB	8C-9A	JAX	2006	3C	NONE	2	0
IIB	8C-9A	JAX	2006	3T	NONE	48	0

Table 7.3.1 continued (IV).

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	JAX	2006	NONE	NONE	12782	0
IIB	8C-9A	JAX	2007	3A	IIB52ab	4107	0
IIB	8C-9A	JAX	2007	3A	NONE	22545	0
IIB	8C-9A	JAX	2007	3B	IIB52ab	170	0
IIB	8C-9A	JAX	2007	3B	NONE	238	0
IIB	8C-9A	JAX	2007	3C	IIB52ab	15	0
IIB	8C-9A	JAX	2007	3C	NONE	11	0
IIB	8C-9A	JAX	2007	3T	NONE	208	0
IIB	8C-9A	JAX	2007	NONE	NONE	12574	0
IIB	8C-9A	JAX	2008	3A	IIB52ab	3299	0
IIB	8C-9A	JAX	2008	3A	NONE	20398	0
IIB	8C-9A	JAX	2008	3B	IIB52ab	238	0
IIB	8C-9A	JAX	2008	3B	NONE	504	0
IIB	8C-9A	JAX	2008	3C	IIB52ab	21	0
IIB	8C-9A	JAX	2008	3C	NONE	7	0
IIB	8C-9A	JAX	2008	3T	NONE	133	0
IIB	8C-9A	JAX	2008	NONE	NONE	19391	0
IIB	8C-9A	JAX	2009	3A	IIB52ab	446	0
IIB	8C-9A	JAX	2009	3A	NONE	8474	0
IIB	8C-9A	JAX	2009	3B	IIB52ab	227	0
IIB	8C-9A	JAX	2009	3B	NONE	448	0
IIB	8C-9A	JAX	2009	3C	IIB52ab	13	0
IIB	8C-9A	JAX	2009	3C	NONE	13	0
IIB	8C-9A	JAX	2009	3T	NONE	247	0
IIB	8C-9A	JAX	2009	NONE	NONE	17683	0
IIB	8C-9A	JAX	2010	3A	IIB52ab	301	0
IIB	8C-9A	JAX	2010	3A	NONE	6784	0
IIB	8C-9A	JAX	2010	3B	IIB52ab	32	0
IIB	8C-9A	JAX	2010	3B	NONE	143	0
IIB	8C-9A	JAX	2010	3C	IIB52ab	19	0
IIB	8C-9A	JAX	2010	3C	NONE	2	0
IIB	8C-9A	JAX	2010	3T	NONE	103	0
IIB	8C-9A	JAX	2010	NONE	NONE	5	0
IIB	8C-9A	MAC	2003	3A	IIB52ab	2772	0
IIB	8C-9A	MAC	2003	3A	NONE	8341	0
IIB	8C-9A	MAC	2003	3B	IIB52ab	7	0
IIB	8C-9A	MAC	2003	3B	NONE	47	0
IIB	8C-9A	MAC	2003	3C	IIB52ab	13	0
IIB	8C-9A	MAC	2003	3C	NONE	1	0
IIB	8C-9A	MAC	2003	3T	NONE	22	0
IIB	8C-9A	MAC	2003	NONE	NONE	6466	0
IIB	8C-9A	MAC	2004	3A	IIB52ab	4651	0
IIB	8C-9A	MAC	2004	3A	NONE	11796	0
IIB	8C-9A	MAC	2004	3B	IIB52ab	38	0
IIB	8C-9A	MAC	2004	3B	NONE	74	0
IIB	8C-9A	MAC	2004	3C	IIB52ab	71	0
IIB	8C-9A	MAC	2004	3C	NONE	6	0
IIB	8C-9A	MAC	2004	3T	NONE	30	0
IIB	8C-9A	MAC	2004	NONE	NONE	12818	0
IIB	8C-9A	MAC	2005	3A	IIB52ab	5401	0
IIB	8C-9A	MAC	2005	3A	NONE	17191	0
IIB	8C-9A	MAC	2005	3B	IIB52ab	155	0
IIB	8C-9A	MAC	2005	3B	NONE	59	0
IIB	8C-9A	MAC	2005	3C	IIB52ab	145	0
IIB	8C-9A	MAC	2005	3C	NONE	28	0
IIB	8C-9A	MAC	2005	3T	NONE	31	0
IIB	8C-9A	MAC	2005	NONE	NONE	20642	0
IIB	8C-9A	MAC	2006	3A	IIB52ab	5555	0
IIB	8C-9A	MAC	2006	3A	NONE	17213	0
IIB	8C-9A	MAC	2006	3B	IIB52ab	54	0
IIB	8C-9A	MAC	2006	3B	NONE	40	0
IIB	8C-9A	MAC	2006	3C	IIB52ab	77	0
IIB	8C-9A	MAC	2006	3C	NONE	3	0
IIB	8C-9A	MAC	2006	3T	NONE	21	0
IIB	8C-9A	MAC	2006	NONE	NONE	25790	0
IIB	8C-9A	MAC	2007	3A	IIB52ab	4348	0

IIB	8C-9A	MAC	2007	3A	NONE	12529	0
IIB	8C-9A	MAC	2007	3B	IIB52ab	42	0
IIB	8C-9A	MAC	2007	3B	NONE	39	0

Table 7.3.1 continued (V).

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	MAC	2007	3C	IIB52ab	88	0
IIB	8C-9A	MAC	2007	3C	NONE	53	0
IIB	8C-9A	MAC	2007	3T	NONE	43	0
IIB	8C-9A	MAC	2007	NONE	NONE	40671	0
IIB	8C-9A	MAC	2008	3A	IIB52ab	3406	0
IIB	8C-9A	MAC	2008	3A	NONE	15505	0
IIB	8C-9A	MAC	2008	3B	IIB52ab	84	0
IIB	8C-9A	MAC	2008	3B	NONE	90	0
IIB	8C-9A	MAC	2008	3C	IIB52ab	66	0
IIB	8C-9A	MAC	2008	3C	NONE	38	0
IIB	8C-9A	MAC	2008	3T	NONE	61	0
IIB	8C-9A	MAC	2008	NONE	NONE	36933	0
IIB	8C-9A	MAC	2009	3A	IIB52ab	5782	0
IIB	8C-9A	MAC	2009	3A	NONE	19111	0
IIB	8C-9A	MAC	2009	3B	IIB52ab	63	0
IIB	8C-9A	MAC	2009	3B	NONE	56	0
IIB	8C-9A	MAC	2009	3C	IIB52ab	179	0
IIB	8C-9A	MAC	2009	3C	NONE	80	0
IIB	8C-9A	MAC	2009	3T	NONE	68	0
IIB	8C-9A	MAC	2009	NONE	NONE	64349	0
IIB	8C-9A	MAC	2010	3A	IIB52ab	12	0
IIB	8C-9A	MAC	2010	3A	NONE	1969	0
IIB	8C-9A	MAC	2010	3B	IIB52ab	5	0
IIB	8C-9A	MAC	2010	3B	NONE	4	0
IIB	8C-9A	MAC	2010	3C	IIB52ab	0	0
IIB	8C-9A	MAC	2010	3C	NONE	0	0
IIB	8C-9A	MAC	2010	3T	NONE	18	0
IIB	8C-9A	MAC	2010	NONE	NONE	0	0
IIB	8C-9A	NEP	2003	3A	IIB52ab	128	0
IIB	8C-9A	NEP	2003	3A	NONE	195	0
IIB	8C-9A	NEP	2003	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2003	3B	NONE	0	0
IIB	8C-9A	NEP	2003	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2003	3C	NONE	0	0
IIB	8C-9A	NEP	2003	3T	NONE	0	0
IIB	8C-9A	NEP	2003	NONE	NONE	8	0
IIB	8C-9A	NEP	2004	3A	IIB52ab	107	0
IIB	8C-9A	NEP	2004	3A	NONE	163	0
IIB	8C-9A	NEP	2004	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2004	3B	NONE	0	0
IIB	8C-9A	NEP	2004	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2004	3C	NONE	0	0
IIB	8C-9A	NEP	2004	3T	NONE	1	0
IIB	8C-9A	NEP	2004	NONE	NONE	6	0
IIB	8C-9A	NEP	2005	3A	IIB52ab	139	0
IIB	8C-9A	NEP	2005	3A	NONE	148	0
IIB	8C-9A	NEP	2005	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2005	3B	NONE	1	0
IIB	8C-9A	NEP	2005	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2005	3C	NONE	0	0
IIB	8C-9A	NEP	2005	3T	NONE	1	0
IIB	8C-9A	NEP	2005	NONE	NONE	15	0
IIB	8C-9A	NEP	2006	3A	IIB52ab	17	0
IIB	8C-9A	NEP	2006	3A	NONE	300	0
IIB	8C-9A	NEP	2006	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2006	3B	NONE	1	0
IIB	8C-9A	NEP	2006	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2006	3C	NONE	0	0
IIB	8C-9A	NEP	2006	3T	NONE	2	0
IIB	8C-9A	NEP	2006	NONE	NONE	6	0
IIB	8C-9A	NEP	2007	3A	IIB52ab	21	0
IIB	8C-9A	NEP	2007	3A	NONE	372	0
IIB	8C-9A	NEP	2007	3B	IIB52ab	1	0
IIB	8C-9A	NEP	2007	3B	NONE	1	0
IIB	8C-9A	NEP	2007	3C	IIB52ab	0	0

IIB	8C-9A	NEP	2007	3C	NONE	0	0
IIB	8C-9A	NEP	2007	3T	NONE	1	0
IIB	8C-9A	NEP	2007	NONE	NONE	9	0
IIB	8C-9A	NEP	2008	3A	IIB52ab	21	0

Table 7.3.1 continued (VI).

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	NEP	2008	3A	NONE	283	0
IIB	8C-9A	NEP	2008	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2008	3B	NONE	0	0
IIB	8C-9A	NEP	2008	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2008	3C	NONE	0	0
IIB	8C-9A	NEP	2008	3T	NONE	1	0
IIB	8C-9A	NEP	2008	NONE	NONE	14	0
IIB	8C-9A	NEP	2009	3A	IIB52ab	18	0
IIB	8C-9A	NEP	2009	3A	NONE	186	0
IIB	8C-9A	NEP	2009	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2009	3B	NONE	0	0
IIB	8C-9A	NEP	2009	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2009	3C	NONE	0	0
IIB	8C-9A	NEP	2009	3T	NONE	1	0
IIB	8C-9A	NEP	2009	NONE	NONE	11	0
IIB	8C-9A	NEP	2010	3A	IIB52ab	2	0
IIB	8C-9A	NEP	2010	3A	NONE	137	0
IIB	8C-9A	NEP	2010	3B	IIB52ab	0	0
IIB	8C-9A	NEP	2010	3B	NONE	0	0
IIB	8C-9A	NEP	2010	3C	IIB52ab	0	0
IIB	8C-9A	NEP	2010	3C	NONE	0	0
IIB	8C-9A	NEP	2010	3T	NONE	1	0
IIB	8C-9A	NEP	2010	NONE	NONE	9	0
IIB	8C-9A	RAJ	2003	3A	IIB52ab	0	0
IIB	8C-9A	RAJ	2003	3A	NONE	17	0
IIB	8C-9A	RAJ	2003	3B	IIB52ab	16	0
IIB	8C-9A	RAJ	2003	3B	NONE	1	0
IIB	8C-9A	RAJ	2003	3C	IIB52ab	20	0
IIB	8C-9A	RAJ	2003	3C	NONE	1	0
IIB	8C-9A	RAJ	2003	3T	NONE	38	0
IIB	8C-9A	RAJ	2003	NONE	NONE	28	0
IIB	8C-9A	RAJ	2004	3A	IIB52ab	1	0
IIB	8C-9A	RAJ	2004	3A	NONE	31	0
IIB	8C-9A	RAJ	2004	3B	IIB52ab	9	0
IIB	8C-9A	RAJ	2004	3B	NONE	5	0
IIB	8C-9A	RAJ	2004	3C	IIB52ab	12	0
IIB	8C-9A	RAJ	2004	3C	NONE	3	0
IIB	8C-9A	RAJ	2004	3T	NONE	69	0
IIB	8C-9A	RAJ	2004	NONE	NONE	18	0
IIB	8C-9A	RAJ	2005	3A	IIB52ab	4	0
IIB	8C-9A	RAJ	2005	3A	NONE	35	0
IIB	8C-9A	RAJ	2005	3B	IIB52ab	11	0
IIB	8C-9A	RAJ	2005	3B	NONE	9	0
IIB	8C-9A	RAJ	2005	3C	IIB52ab	14	0
IIB	8C-9A	RAJ	2005	3C	NONE	2	0
IIB	8C-9A	RAJ	2005	3T	NONE	79	0
IIB	8C-9A	RAJ	2005	NONE	NONE	28	0
IIB	8C-9A	RAJ	2006	3A	IIB52ab	5	0
IIB	8C-9A	RAJ	2006	3A	NONE	74	0
IIB	8C-9A	RAJ	2006	3B	IIB52ab	15	0
IIB	8C-9A	RAJ	2006	3B	NONE	4	0
IIB	8C-9A	RAJ	2006	3C	IIB52ab	17	0
IIB	8C-9A	RAJ	2006	3C	NONE	3	0
IIB	8C-9A	RAJ	2006	3T	NONE	102	0
IIB	8C-9A	RAJ	2006	NONE	NONE	16	0
IIB	8C-9A	RAJ	2007	3A	IIB52ab	27	0
IIB	8C-9A	RAJ	2007	3A	NONE	133	0
IIB	8C-9A	RAJ	2007	3B	IIB52ab	19	0
IIB	8C-9A	RAJ	2007	3B	NONE	13	0
IIB	8C-9A	RAJ	2007	3C	IIB52ab	33	0
IIB	8C-9A	RAJ	2007	3C	NONE	8	0
IIB	8C-9A	RAJ	2007	3T	NONE	194	0
IIB	8C-9A	RAJ	2007	NONE	NONE	19	0
IIB	8C-9A	RAJ	2008	3A	IIB52ab	29	0

IIB	8C-9A	RAJ	2008	3A	NONE	187	0
IIB	8C-9A	RAJ	2008	3B	IIB52ab	21	0
IIB	8C-9A	RAJ	2008	3B	NONE	6	0
IIB	8C-9A	RAJ	2008	3C	IIB52ab	189	0
IIB	8C-9A	RAJ	2008	3C	NONE	7	0

Table 7.3.1 continued (VII).

annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	RAJ	2008	3T	NONE	165	0
IIB	8C-9A	RAJ	2008	NONE	NONE	26	0
IIB	8C-9A	RAJ	2009	3A	IIB52ab	33	0
IIB	8C-9A	RAJ	2009	3A	NONE	360	0
IIB	8C-9A	RAJ	2009	3B	IIB52ab	20	0
IIB	8C-9A	RAJ	2009	3B	NONE	10	0
IIB	8C-9A	RAJ	2009	3C	IIB52ab	53	0
IIB	8C-9A	RAJ	2009	3C	NONE	4	0
IIB	8C-9A	RAJ	2009	3T	NONE	241	0
IIB	8C-9A	RAJ	2009	NONE	NONE	41	0
IIB	8C-9A	RAJ	2010	3A	IIB52ab	21	0
IIB	8C-9A	RAJ	2010	3A	NONE	277	0
IIB	8C-9A	RAJ	2010	3B	IIB52ab	10	0
IIB	8C-9A	RAJ	2010	3B	NONE	9	0
IIB	8C-9A	RAJ	2010	3C	IIB52ab	20	0
IIB	8C-9A	RAJ	2010	3C	NONE	6	0
IIB	8C-9A	RAJ	2010	3T	NONE	217	0
IIB	8C-9A	RAJ	2010	NONE	NONE	8	0
IIB	8C-9A	WHB	2003	3A	IIB52ab	4106	0
IIB	8C-9A	WHB	2003	3A	NONE	17112	0
IIB	8C-9A	WHB	2003	3B	IIB52ab	0	0
IIB	8C-9A	WHB	2003	3B	NONE	2	0
IIB	8C-9A	WHB	2003	3C	IIB52ab	20	0
IIB	8C-9A	WHB	2003	3C	NONE	11	0
IIB	8C-9A	WHB	2003	3T	NONE	0	0
IIB	8C-9A	WHB	2003	NONE	NONE	255	0
IIB	8C-9A	WHB	2004	3A	IIB52ab	5109	0
IIB	8C-9A	WHB	2004	3A	NONE	21146	0
IIB	8C-9A	WHB	2004	3B	IIB52ab	1	0
IIB	8C-9A	WHB	2004	3B	NONE	1	0
IIB	8C-9A	WHB	2004	3C	IIB52ab	17	0
IIB	8C-9A	WHB	2004	3C	NONE	18	0
IIB	8C-9A	WHB	2004	3T	NONE	0	0
IIB	8C-9A	WHB	2004	NONE	NONE	109	0
IIB	8C-9A	WHB	2005	3A	IIB52ab	5916	0
IIB	8C-9A	WHB	2005	3A	NONE	19770	0
IIB	8C-9A	WHB	2005	3B	IIB52ab	1	0
IIB	8C-9A	WHB	2005	3B	NONE	2	0
IIB	8C-9A	WHB	2005	3C	IIB52ab	18	0
IIB	8C-9A	WHB	2005	3C	NONE	1	0
IIB	8C-9A	WHB	2005	3T	NONE	0	0
IIB	8C-9A	WHB	2005	NONE	NONE	89	0
IIB	8C-9A	WHB	2006	3A	IIB52ab	4379	0
IIB	8C-9A	WHB	2006	3A	NONE	17065	0
IIB	8C-9A	WHB	2006	3B	IIB52ab	0	0
IIB	8C-9A	WHB	2006	3B	NONE	1	0
IIB	8C-9A	WHB	2006	3C	IIB52ab	14	0
IIB	8C-9A	WHB	2006	3C	NONE	3	0
IIB	8C-9A	WHB	2006	3T	NONE	0	0
IIB	8C-9A	WHB	2006	NONE	NONE	215	0
IIB	8C-9A	WHB	2007	3A	IIB52ab	4356	0
IIB	8C-9A	WHB	2007	3A	NONE	17359	0
IIB	8C-9A	WHB	2007	3B	IIB52ab	1	0
IIB	8C-9A	WHB	2007	3B	NONE	1	0
IIB	8C-9A	WHB	2007	3C	IIB52ab	10	0
IIB	8C-9A	WHB	2007	3C	NONE	9	0
IIB	8C-9A	WHB	2007	3T	NONE	1	0
IIB	8C-9A	WHB	2007	NONE	NONE	520	0
IIB	8C-9A	WHB	2008	3A	IIB52ab	4722	0
IIB	8C-9A	WHB	2008	3A	NONE	17707	0
IIB	8C-9A	WHB	2008	3B	IIB52ab	1	0
IIB	8C-9A	WHB	2008	3B	NONE	3	0
IIB	8C-9A	WHB	2008	3C	IIB52ab	10	0

IIB	8C-9A	WHB	2008	3C	NONE	4	0
IIB	8C-9A	WHB	2008	3T	NONE	0	0
IIB	8C-9A	WHB	2008	NONE	NONE	351	0
IIB	8C-9A	WHB	2009	3A	IIB52ab	5104	0
IIB	8C-9A	WHB	2009	3A	NONE	20738	0
IIB	8C-9A	WHB	2009	3B	IIB52ab	1	0

Table 7.3.1 continued (VIII).

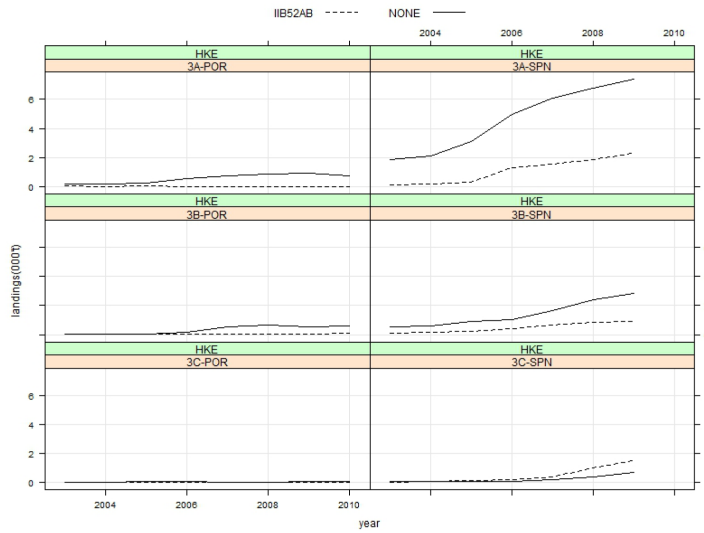
annex	area	species	year	gear	specon	landings	discards
IIB	8C-9A	WHB	2009	3B	NONE	0	0
IIB	8C-9A	WHB	2009	3C	IIB52ab	15	0
IIB	8C-9A	WHB	2009	3C	NONE	11	0
IIB	8C-9A	WHB	2009	3T	NONE	1	0
IIB	8C-9A	WHB	2009	NONE	NONE	363	0
IIB	8C-9A	WHB	2010	3A	IIB52ab	2	0
IIB	8C-9A	WHB	2010	3A	NONE	1354	0
IIB	8C-9A	WHB	2010	3B	IIB52ab	0	0
IIB	8C-9A	WHB	2010	3B	NONE	0	0
IIB	8C-9A	WHB	2010	3C	IIB52ab	0	0
IIB	8C-9A	WHB	2010	3C	NONE	0	0
IIB	8C-9A	WHB	2010	3T	NONE	0	0
IIB	8C-9A	WHB	2010	NONE	NONE	0	0

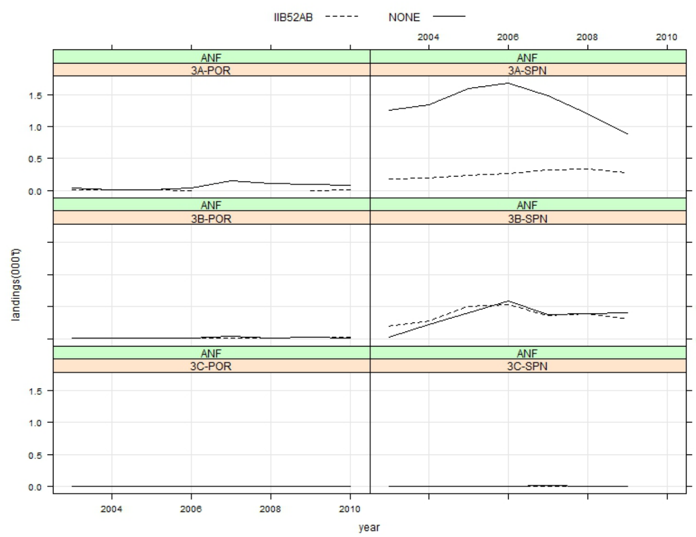
Figure 7.3.1 shows landings of hake, Nephrops and anglerfish by Member State and derogation. Table 7.3.2 summarizes the major gears catching each species, the three species combined and the percentage of landings caught by vessels under effort control.

Table 7.3.2. Fleets that fish hake, Nephrops and anglerfish landings (2007-2009 average).

SPECIES	% LANDINGS	FLEET	% LANDING UNDER EFFORT RESTRICTIONS
HKE+NEP+ANF	55	SPN-3A	78
HKE	56	SPN-3A	78
HKE	20	SPN-3B	74
HKE	9	SPN-3C	30
NEP	69	POR-3A	99
ANF	52	SPN-3A	79

Taking into account only this three species, the Spanish regulated trawlers (SPN-3A) are the biggest players of this fishery (56% of landings between 2007 and 2009) (Table 7.3.2). 78% of hake, Nephrops and anglerfish landings from Spanish regulated trawlers (SPN-3A) were made by fleet under effort restrictions (“none”, continuous line) (2007-2009 average).





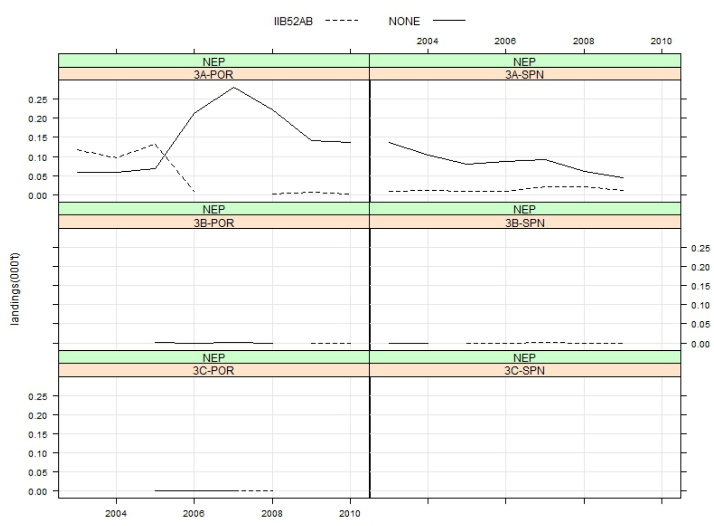


Fig. 7.3.1 Trends in landings of hake, Nephrops and anglerfish by Member State.

The data given in the Table 7.3.1 form the basis of the Figure 7.3.2 displaying the relative catch compositions by gear for the years 2003-2010. The lack of dark bars (representing discards) further indicates that data were not provided. The very low catches in 2010 are related to the lack of information from Spanish fleets.

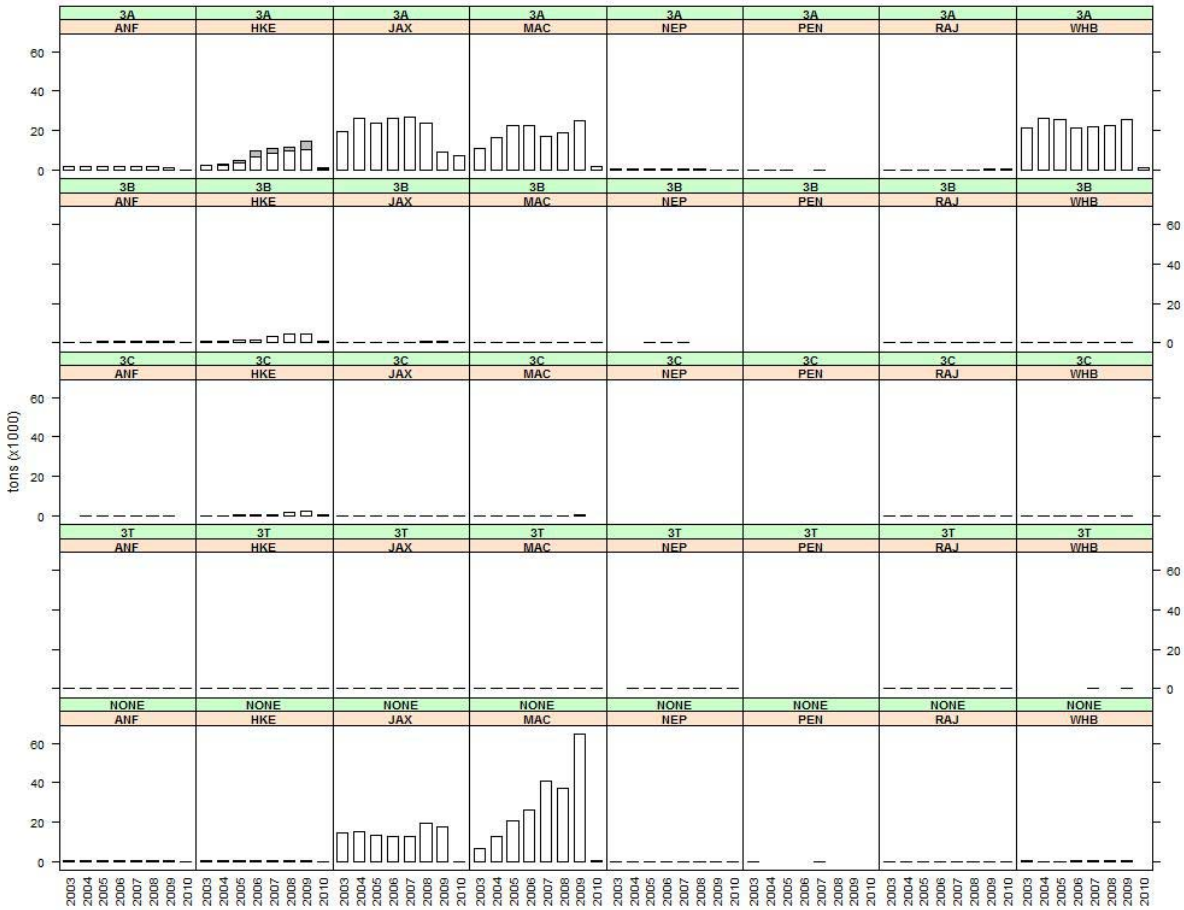


Figure 7.3.2 Relative catch compositions by gear for the years 2003-2010.

Most of hake catch comes from regulated trawlers (3A), which also harvest high quantities of horse mackerel, mackerel and blue whiting (Figure 7.3.2). The main species in unregulated gears (NONE) is mackerel and horse mackerel. Gillnets and longlines also show a higher percentage of hake on their catch composition.

7.4. Trend in CPUE of hake

Due to lack of Spanish data (that represent a high percentage of the total catches of the stock of southern hake), no CPUE trends are presented. The assessment performed by WGHMM in May 2011 (ICES, 2011) shows that hake biomass has increased since 2006. If effort data from all fleets were available, the CPUE trend would probably be consistent with this increase.

7.5. Ranked derogations according to relative contributions to hake and Nephrops catches

Regarding the catches of hake, Nephrops and anglerfish (Table 7.5.1), the majority of the catches comes from vessels using regulated gears.

Table 7.5.1. Ranked catches of hake, Nephrops and anglerfish by derogation (2003-2010).

Annex	reg_area	species	reg_gear	2003 rel	2004 rel	2005 rel	2006 rel	2007 rel	2008 rel	2009 rel	2010 rel
IIB	8c-9a	HKE	3a	0.65	0.72	0.73	0.80	0.72	0.65	0.65	0.57
IIB	8c-9a	HKE	3b	0.19	0.18	0.18	0.13	0.19	0.22	0.20	0.28
IIB	8c-9a	HKE	PEL_SEINE	0.05	0.00	0.00	0.00	0.00	0.00	0.00	
IIB	8c-9a	HKE	GILL	0.04	0.04	0.03	0.02	0.02	0.02	0.01	
IIB	8c-9a	HKE	3c	0.04	0.04	0.04	0.03	0.04	0.08	0.11	0.05
IIB	8c-9a	HKE	none	0.02	0.01	0.01	0.00	0.00	0.01	0.00	
IIB	8c-9a	HKE	OTTER	0.01	0.00	0.00	0.01	0.01	0.01	0.01	
IIB	8c-9a	HKE	3t	0.00	0.01	0.01	0.01	0.02	0.01	0.02	0.09
IIB	8c-9a	HKE	POTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIB	8c-9a	HKE	BEAM				0.00	0.00	0.00	0.00	
IIB	8c-9a	NEP	3a	0.98	0.97	0.94	0.97	0.97	0.95	0.94	0.93
IIB	8c-9a	NEP	none	0.01	0.00						
IIB	8c-9a	NEP	OTTER	0.01	0.01	0.00	0.00	0.00	0.00		
IIB	8c-9a	NEP	POTS	0.01	0.01	0.05	0.02	0.02	0.04	0.05	0.06
IIB	8c-9a	NEP	3b			0.00	0.00	0.00			
IIB	8c-9a	NEP	3t		0.00	0.00	0.01	0.00	0.00	0.00	0.01
IIB	8c-9a	ANF	3a	0.74	0.62	0.55	0.53	0.60	0.58	0.51	0.46
IIB	8c-9a	ANF	3b	0.11	0.20	0.27	0.30	0.24	0.28	0.29	0.12
IIB	8c-9a	ANF	GILL	0.08	0.08	0.09	0.08	0.05	0.06	0.07	
IIB	8c-9a	ANF	3t	0.04	0.07	0.06	0.05	0.07	0.06	0.09	0.41
IIB	8c-9a	ANF	OTTER	0.02	0.01	0.01	0.01	0.01	0.01	0.01	
IIB	8c-9a	ANF	none	0.01	0.01	0.01	0.03	0.02	0.01	0.01	
IIB	8c-9a	ANF	PEL_SEINE	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
IIB	8c-9a	ANF	POTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
IIB	8c-9a	ANF	3c		0.00	0.00	0.00	0.01	0.00	0.00	

7.6. Unregulated gears

Spanish unregulated gears (SPN-NONE) deploy 34% of the effort in the area. Figure 7.2.2 identifies the Spanish unregulated gears (SPN-NONE) (2007-2009 average), 53% corresponds to pelagic seine, 30% to troll (tuna) and hand (mackerel) lines, 9% to pots and 6% to gillnet with unregulated or unknown mesh sizes. Portuguese unregulated gears deploy a residual effort on the area.

7.7. Sampling plans, fishing effort and catches (landings and discards) of hake, Nephrops and associated species of vessels <10m

Only Portugal has provided data for vessels below 10 m operating in areas 8c-9a, though specifying neither gear nor fishery. However, as no data from Spain were available and Annex IIB does not include limitations on this fleet effort, no analysis on this fleet segment was performed.

Since 2003 Portugal has carried out a specific sampling plan to collect data on the activity of the small scale fleet (<10m vessels) operating in continental waters. The data is collected with a stratified random strategy by skippers' interviews, and provides information about catches by species and effort. This sampling plan is under the scope of Reg.(EC) 1639/2001 and the results were presented on the annual reports requested by the DGMARE.

7.8. Spatial distribution patterns of effective fishing effort of trawled gears 2003-2006

Portugal and Spain submitted effort by ICES rectangle. Figure 7.8.1 shows the distribution of effort for regulated gears, with effort control ("none") and without effort restriction ("IIB52ab"). For the year 2010, only the effort from Portuguese fleets is plotted.

On the other hand, in Figure 7.8.1 all the Spanish longline effort was allocated by mistake to specon "none".

As referred in Section 7.1, STECF-EWG considers that the use of fishing days (or kW*days) to manage effort of static gears such as gillnets and longlines is a very poor approximation of the effective effort. Although the Figures 7.8.1. a and b present the effective effort in the same units, the effort deployed by the different gears is not comparable.

No changes in the effort distribution pattern have been identified since the implementation of the fishing effort regulation.

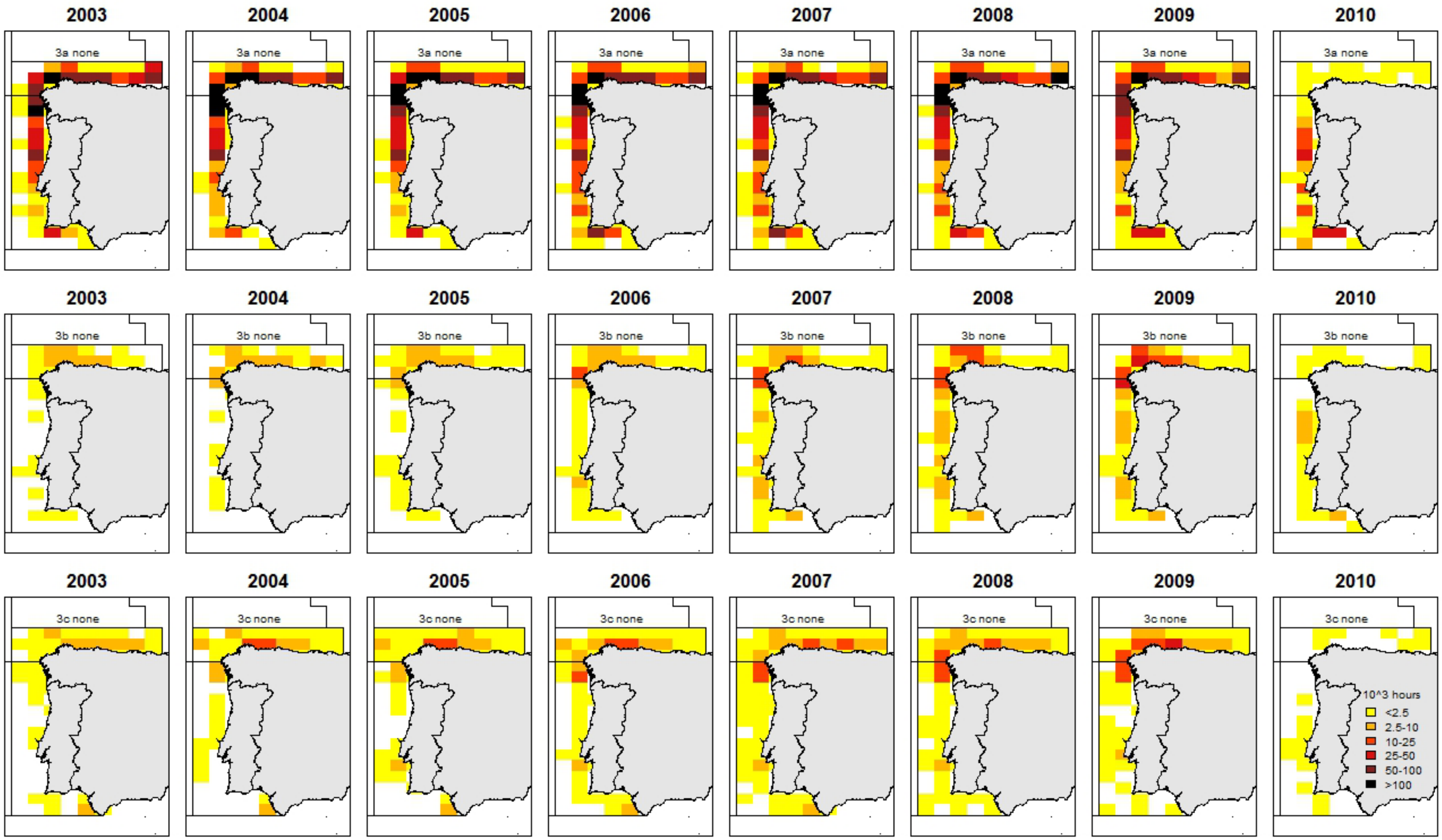


Figure 7.8.1.a Distribution of effort for regulated gears with effort control (specon “none”). All the Spanish longline effort was allocated by mistake to specon “none” (3a = trawl, 3b = gillnet and 3c = longline).

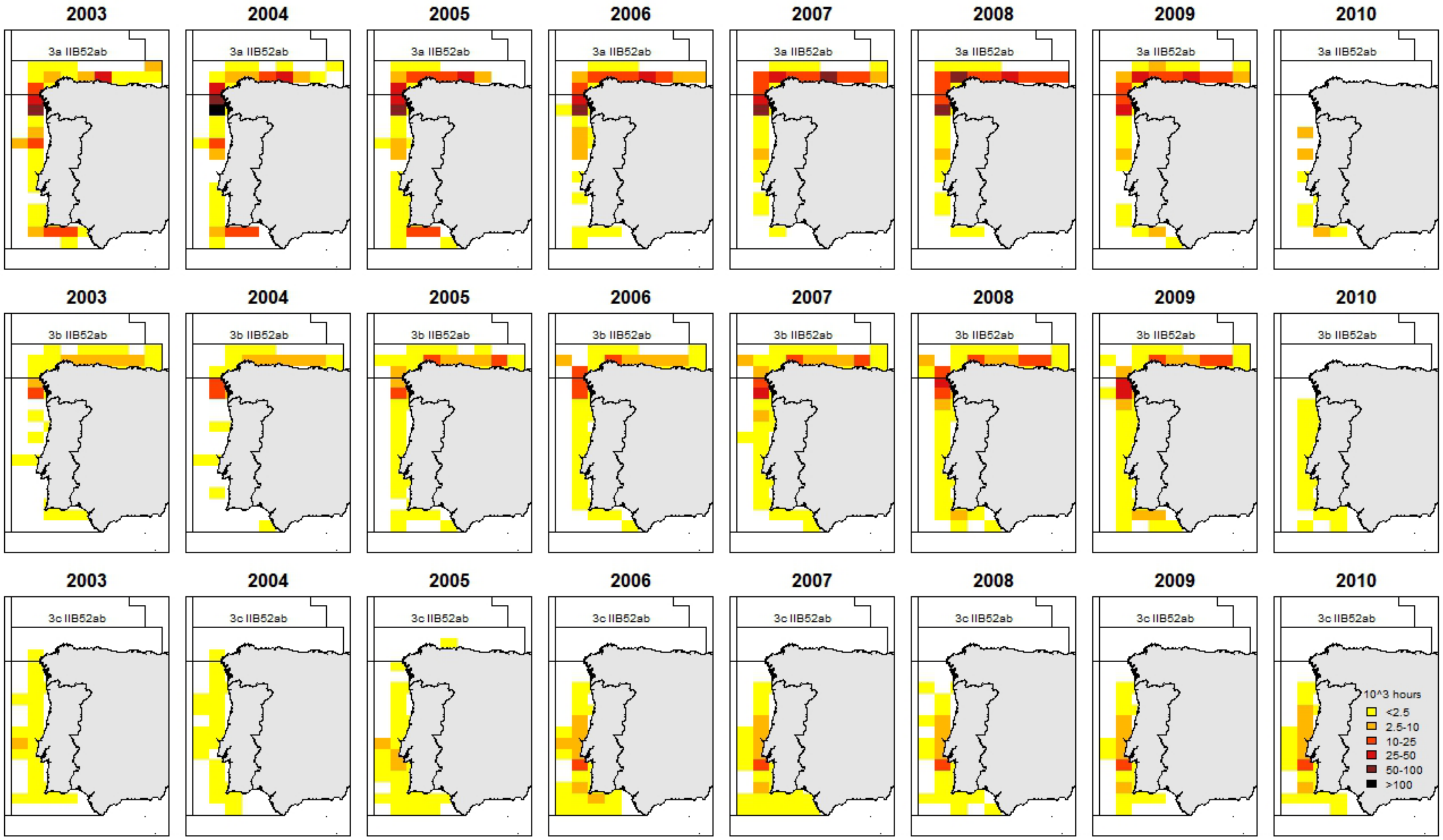


Figure 7.8.1.b Distribution of effort for regulated gears without effort restriction (under special conditions “IIB52ab”). All the Spanish longline effort was allocated by mistake to specon “none” (3a = trawl, 3b = gillnet and 3c = longline).

7.9. *Questions from EWG to data providers*

EWG invited the data providers to clarify some issues after the EWG 11-06 meeting in order to allow a better analysis of the information provided. The question raised to the data providers and their replies are reported below.

EWG noticed some changes regarding Portuguese data compared to last year submission. EWG invited Portugal to comment on these changes and requested information on any changes in methodology that may have been implemented.

PORTUGAL: The main differences between the data submitted in 2010 and the current year are related to a different allocation of effort and catches to areas and gears, avoiding the double allocation of the same data. The criterion used was the predominant area and the predominant gear used by trip. The application of this criterion resulted in a reduction of effort in some areas/gears. Some bugs were also corrected in the allocation routines. No other changes in the methodology were implemented.

The clarifications given in the SGMOS 10-05 report remain valid (definition of fishing days, sources of data, how effort was computed and allocated to controlled effort or under special conditions). Only the answer to the question 4 of that report was changed)

No questions or clarifications were addressed to SPAIN because this MS has not provided any data..

8. REVIEW OF ANNEX IIC OF REGULATION 53/2010 IN THE CONTEXT OF THE RECOVERY OF WESTERN CHANNEL SOLE (PROPOSAL COM (2003) 819 FINAL)

8.1. *General considerations regarding the derogations and special conditions*

STECF-EWG-11-11 notes that assignment of derogations and special conditions is based on best expert knowledge. Data errors may exist regarding the huge data bases and the special knowledge required todeal with them (grouping and exact formulation of data queries).

STECF-EWG noted four years ago a change in Annexes IIC to Council Reg. 41/2007 for 2007 as compared to the Annex IIC to 51/2006 which removed the special conditions IIC71a and IIC71b to static nets <220mm (3b) . STECF-EWG further notes that there were no special derogations added to Annex IIC of Council Reg. 40/2008, Annex IIC of Council Reg. 43/2009, Annex IIC of Council Reg. 53/2010 or Annex IIC of Council Reg. 57/2011. Table 8.1.1 lists the historic developments of days at sea by vessel and derogations.

Table 8.1.1 – Western Channel - Historic trends in days at sea by vessel specified in the Council Regulations since 2005.

Annex	AREA	REG GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	3a	none		240	216	192	192	192	164	164
IIc	7e	3b	none		240	216	192	192	192	164	164
IIc	7e	3b deleted	ICC71ab			365					

8.2. Trend in effort 2000-2010 by derogation and by Member State

Information is available from 2000, and can be found on the JRC website:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

The previously identified French data problems affecting 2002 have so far not been corrected. STECF-EWG decided therefore only to provide effort trends graphically starting from 2003. For brevity and clarity in this report only information since 2004 are tabulated. The dominating fleet from the 2 existing derogations in 7e (3a and 3b) is by far the English beam trawl fleet with percentages in the last 8 years in excess of 55% of the effort deployed (Table 8.2.1 and Figure 8.2.1 and 8.2.2). The other fleets involved are the French static gear fleet with a decreasing trend from 22% in 2006 to 9% in 2010 of the deployed effort and the Belgian beam trawl fleet with an increasing trend from less then 1% in 2000 up to about 16% in 2007 followed by a fluctuation around 12%. STECF-EWG however notes that about 83% of the overall effort deployed could not be allocated to regulated gear (e.g. gears outside the regulation such as otter- and pelagic trawls, dredges and pots). The “total” trend in Figure 8.2.1 is therefore highly influenced by the none regulated gear group. There is an overall downward trend in both the beam trawl fleet and the static gear in the last few years with a small increase of the beam trawl effort in 2010. The composition of the unregulated gears can be found in section 8.6. Figure 8.2.3 shows the trends for all the unregulated gear in area VIIe.

The difference between the data provided in 2009 and 2010 is shown in Table 8.2.2 as a percentage. A positive value should be interpreted as a higher value in 2010 compared to 2009 where a negative value means that the 2010 data is lower than the 2009 value. Although the only differences are for the Belgian fleets, it should be noted that all the French data series was revised substantially in 2010 as new calculating methods have been introduced.

Information on GT*days at sea and the number of vessels active in 7e are not presented in this report but are available on the JRC website (see link above).

The trends in the nominal effort of the 2 derogations (3a and 3b) are illustrated in Table 8.2.3. The beam trawl fleets decreased gradually from 2% below the 2004 level in 2005 to 39% below that level in 2009. In 2010, the relative effort deployed was 34% below the 2004 level. Also the static gear effort dropped substantially in the last 5 years from 4% below the 2004 level in 2006 to -71% in 2010. A substantial relative change in the last year is only observed for the static gear (-42%).

Table 8.2.1 – Western Channel - Trend in nominal effort (kW*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 57/2011) and Member State, 2004-2010. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 5 of the report.

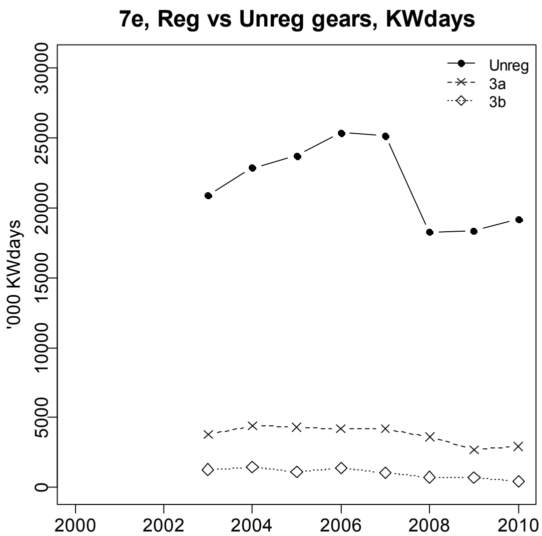
ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009	2010
IIc	7e	3a	none	BEL	633428	689624	628907	837161	584560	358399	383303
IIc	7e	3a	none	ENG	3206806	3227096	3283897	3021075	2870177	2197118	2227991
IIc	7e	3a	none	FRA	317275	261700	289867	320576	146443	138669	303078
IIc	7e	3a	none	GBJ	209969	121139					
IIc	7e	3a	none	IRL	34577	16518	6474	16610	2143	442	
IIc	7e	3a	none	NED							
IIc	7e	3a	none	SCO				3666		1396	
IIc	**7e**	**3a Total**	**none**		**4402055**	**4316077**	**4209145**	**4199088**	**3603323**	**2696024**	**2914372**
IIc	7e	3b	none	ENG	206294	178818	153434	103278	104187	104045	109257
IIc	7e	3b	none	FRA	1236654	946127	1236595	920004	615534	611990	304540
IIc	7e	3b	none	SCO			1215	3240	9315	2430	
IIc	**7e**	**3b Total**	**none**		**1442948**	**1124945**	**1391244**	**1026522**	**729036**	**718465**	**413797**
IIc	7e	none	none	BEL	6625	11039	17515	17231	45760	106007	138125
IIc	7e	none	none	DEN	1424	46389	102713	31213	88637	17994	90505
IIc	7e	none	none	ENG	4177419	4262278	4138665	4149225	3717287	4080660	4204415
IIc	7e	none	none	FRA	17059462	17704245	19413439	19358115	12618537	12534545	12823801
IIc	7e	none	none	GBG	75868	57128	45780	57710	26194	36366	68030
IIc	7e	none	none	GBJ	1476	6745	19360	30580	25740	31020	38060
IIc	7e	none	none	GER	106234	92768	29865	0	36994	21196	139157
IIc	7e	none	none	IOM	0	0	19902	1116	778	0	0
IIc	7e	none	none	IRL	347597	152539	3880	23340	1023	14228	52800
IIc	7e	none	none	LIT	0	0	0	0	0	29520	0
IIc	7e	none	none	NED	449855	632891	956066	894614	1073200	801327	1040600
IIc	7e	none	none	NIR	1302	0	0	0	0	0	576
IIc	7e	none	none	SCO	607935	691419	585805	595030	606253	674277	598441
IIc	**7e**	**none Total**	**none**		**22835197**	**23657441**	**25332990**	**25158174**	**18240403**	**18347140**	**19194510**
IIc	**7e**	**Grand Total**	**none**		**28713946**	**29174898**	**30975985**	**30396258**	**22591645**	**21780512**	**22522679**

Table 8.2.2 – Western Channel – Percentage difference in effort (kW*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 57/2011) and Member State, 2004-2009 between the data provided in 2010 and 2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in section 5.

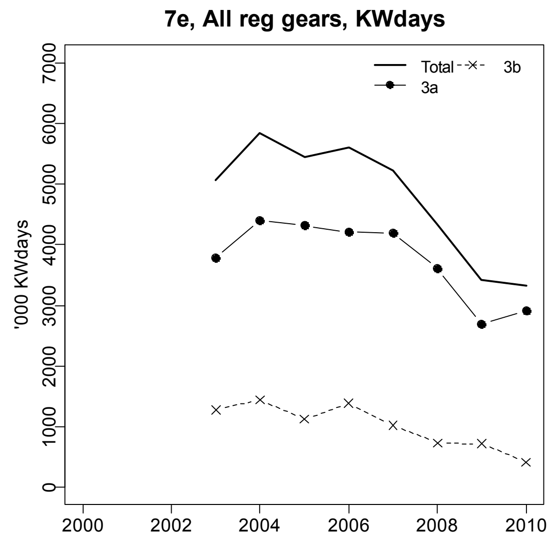
ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009
IIc	7e	3a	none	BEL	0%	0%	0%	-28%	0%	-18%
IIc	7e	3a	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	GBJ	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	IRL	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	NED	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	3b	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	3b	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	3b	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	BEAM	none	BEL	0%	0%	0%	0%	0%	-51%
IIc	7e	BEAM	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	BEAM	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	BEAM	none	GBJ	0%	0%	0%	0%	0%	0%
IIc	7e	BEAM	none	IRL	0%	0%	0%	0%	0%	0%
IIc	7e	BEAM	none	NED	0%	0%	0%	0%	0%	0%
IIc	7e	DEM_SEINE	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	DEM_SEINE	none	NED	0%	0%	0%	0%	0%	0%
IIc	7e	DEM_SEINE	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	BEL	0%	0%	0%	0%	0%	-6%
IIc	7e	DREDGE	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	GBJ	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	IOM	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	IRL	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	NED	0%	0%	0%	0%	0%	0%
IIc	7e	DREDGE	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	GILL	none	BEL	0%	0%	0%	0%	0%	0%
IIc	7e	GILL	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	GILL	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	GILL	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	LONGLINE	none	DEN	0%	0%	0%	0%	0%	0%
IIc	7e	LONGLINE	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	LONGLINE	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	LONGLINE	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	BEL	0%	0%	0%	0%	0%	-32%
IIc	7e	OTTER	none	DEN	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	GBG	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	GBJ	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	IRL	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	NED	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	NIR	0%	0%	0%	0%	0%	0%
IIc	7e	OTTER	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_SEINE	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	DEN	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	GBG	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	GER	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	IRL	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	NED	0%	0%	0%	0%	0%	0%
IIc	7e	PEL_TRAWL	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	POTS	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	POTS	none	FRA	0%	0%	0%	0%	0%	0%
IIc	7e	POTS	none	GBG	0%	0%	0%	0%	0%	0%
IIc	7e	POTS	none	GBJ	0%	0%	0%	0%	0%	0%
IIc	7e	POTS	none	IRL	0%	0%	0%	0%	0%	0%
IIc	7e	POTS	none	SCO	0%	0%	0%	0%	0%	0%
IIc	7e	TRAMMEL	none	ENG	0%	0%	0%	0%	0%	0%
IIc	7e	TRAMMEL	none	FRA	0%	0%	0%	0%	0%	0%

Table 8.2.3 – Western Channel - Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 57/2011), 2004-2010. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.

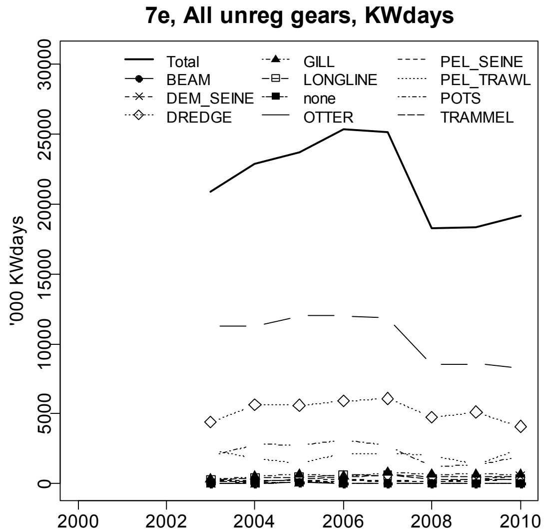
ANNEX	REG ARE/	REG GEAR (	SPECON	2004	2005	2006	2007	2008	2009	2010	Rel. Change to 04	Rel. Change to 09
IIc	7e	3a	none	4402055	4316077	4209145	4199088	3603323	2696024	2914372	-0.34	0.08
IIc	7e	3b	none	1442948	1124945	1391244	1026522	729036	718465	413797	-0.71	-0.42
IIc	7e	none	none	22835197	23657441	25332990	25158174	18240403	18347140	19194510	-0.16	0.05
Sum	**7e**			**28713946**	**29174898**	**30975985**	**30396258**	**22591645**	**21780512**	**22522679**	-0.22	0.03



Figures 8.2.1 – Western Channel -Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 57/2011), 2003-2010. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.



Figures 8.2.2 – Western Channel -Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 57/2011), 2003-2010. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.



Figures 8.2.3 – Western Channel -Trend in nominal effort (kW*days at sea) by unregulated gear according to Table 1 of Annex IIC (Coun. Reg. 57/2011), 2003-2010. Data qualities are summarised in section 5.5.2 and Table 5.5.2.1.

8.3. Trend in catch estimates 2004-2010 by derogation in management area 7e

Although the data available for the review of Annex IIC of regulation 53/2010 comes from all countries involved in the fisheries, there is little information on discards for most of the species. Only very sparse discard information is available for anglerfish, cod, haddock, hake, plaice, sole and whiting. The lack of discard information on plaice in particular, increases the likelihood of incorrect assumptions on total removals for that species.

The following Table 8.3.1 lists the landings, discards and discard rates for the main species by derogations. For brevity, the following sections represent the landings and discards by derogation in weight for a subset of the species caught ie. anglerfish (ANF), cod (COD), haddock (HAD), hake, (HKE), *Nephrops* (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). However, additional data queries for other species can be made depending on data provisions of the national catches by the experts or national institutes. The data given in the table form the basis of Figure 8.3.1 displaying the catch compositions by derogations for the years 2004-2010. The absence of dark bars representing discards also indicates lack of observations rather than low discard numbers.

Figure 8.3.1 shows that in the beam trawl fleets (3a) landings of anglerfish have substantially increased in 2010. Sole and plaice landings have been at a lower level since 2006/2007. Landings of the other main species have been rather stable at low levels. Landings by static nets (derogations 3b) are dominated by anglerfish which show a sharp decline since 2007. The category “none” which is responsible for most of the landings (except for sole, plaice and partly anglerfish) consist mainly of otter trawls (see also section 8.6). Information from otter trawls suggest that there is substantial discarding of cod, haddock and whiting in 2010 (78%, 52% and 40% respectively). However, it should be noted that there is no discard information available for the period before 2010, and therefore no trends in discard practices can be concluded. Landings of anglerfish have dropped substantially in 2010, whereas landings of haddock and whiting have increased in the last 5 years. Cod landings have fluctuated around the same levels since 2006. Information on landings and discards at age for derogation 3a, and the main none regulated gear (otter trawl) are shown in Figures 8.3.2-4 for sole, plaice and cod respectively. No catch at age was available for derogation 3b. Again, it should be noted that discard information is very sparse and the age compositions before 2010 should be interpreted as landings composition.

Tab. 8.3.1 – Western Channel - Landings (t), discards (t) and relative discard rates by species and derogation, 2004-2010 – Note: Discard information for area 7e are sparse and not available for all countries.

ANNEX	REG_AREA	REG_GEAR	SPECIES	2003 L	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R
IIc	7e	3a	ANF	500	769			795			1013			1086	105	0.09	959	74	0.07	916	98	0.10	1344	92	0.06
IIc	7e	3b	ANF	635	824			618			459			318			302			303			12		
IIc	7e	none	ANF	2505	2805			3412			2891			3256			2619			2688			1071		
IIc	7e	3a	COD	33	29			32			36			49	2	0.04	37			28	1	0.03	30	16	0.35
IIc	7e	3b	COD	26	16			15			16			13			8			13			10		
IIc	7e	none	COD	669	231			302			416			511			451			433			430	1504	0.78
IIc	7e	3a	HAD	18	14	2	0.13	10			17			22			30			38			55	95	0.63
IIc	7e	3b	HAD	4	4			8			3			2			1			1			4		
IIc	7e	none	HAD	708	384	9	0.02	362			492			703			1023			1166			1439	1533	0.52
IIc	7e	3a	HKE	5	6			6	18	0.75	6	6	0.50	3			10			12			7		
IIc	7e	3b	HKE	172	114			98			60			19			9			3			7		
IIc	7e	none	HKE	235	179	7	0.04	205	88	0.30	117	14	0.11	88			102			109			77		
IIc	7e	3a	NEP	0	0			0			0			0			0			0			0		
IIc	7e	3b	NEP	0	0			0			0			0			0			0			0		
IIc	7e	none	NEP	4	8			13			6			10			9			9			16		
IIc	7e	3a	PLE	820	801			767			743			571	2	0.00	547	9	0.02	581	2	0.00	612	4	0.01
IIc	7e	3b	PLE	11	19			24			13			7			4			6			7		
IIc	7e	none	PLE	264	242			279			322			255			261			274			324	70	0.18
IIc	7e	3a	POK	0	1			0			0			0			0			0			0		
IIc	7e	3b	POK	6	11			17			3			1			1			3			5		
IIc	7e	none	POK	6	5			2			3			1			1			1			16		
IIc	7e	3a	SOL	201	184			486			530			497	1	0.00	430			347	7	0.02	376	4	0.01
IIc	7e	3b	SOL	29	49			71			41			49			45			48			22		
IIc	7e	none	SOL	247	192			300			268			273			232			222			197	4	0.02
IIc	7e	3a	WHG	72	61			53	1	0.02	45			45	1	0.02	48			38			30	4	0.12
IIc	7e	3b	WHG	9	7			5			10			8			7			5			10		
IIc	7e	none	WHG	1898	1352			1478	16	0.01	1293	4	0.00	1407		0.00	1501	163	0.10	1729			1779	1165	0.40

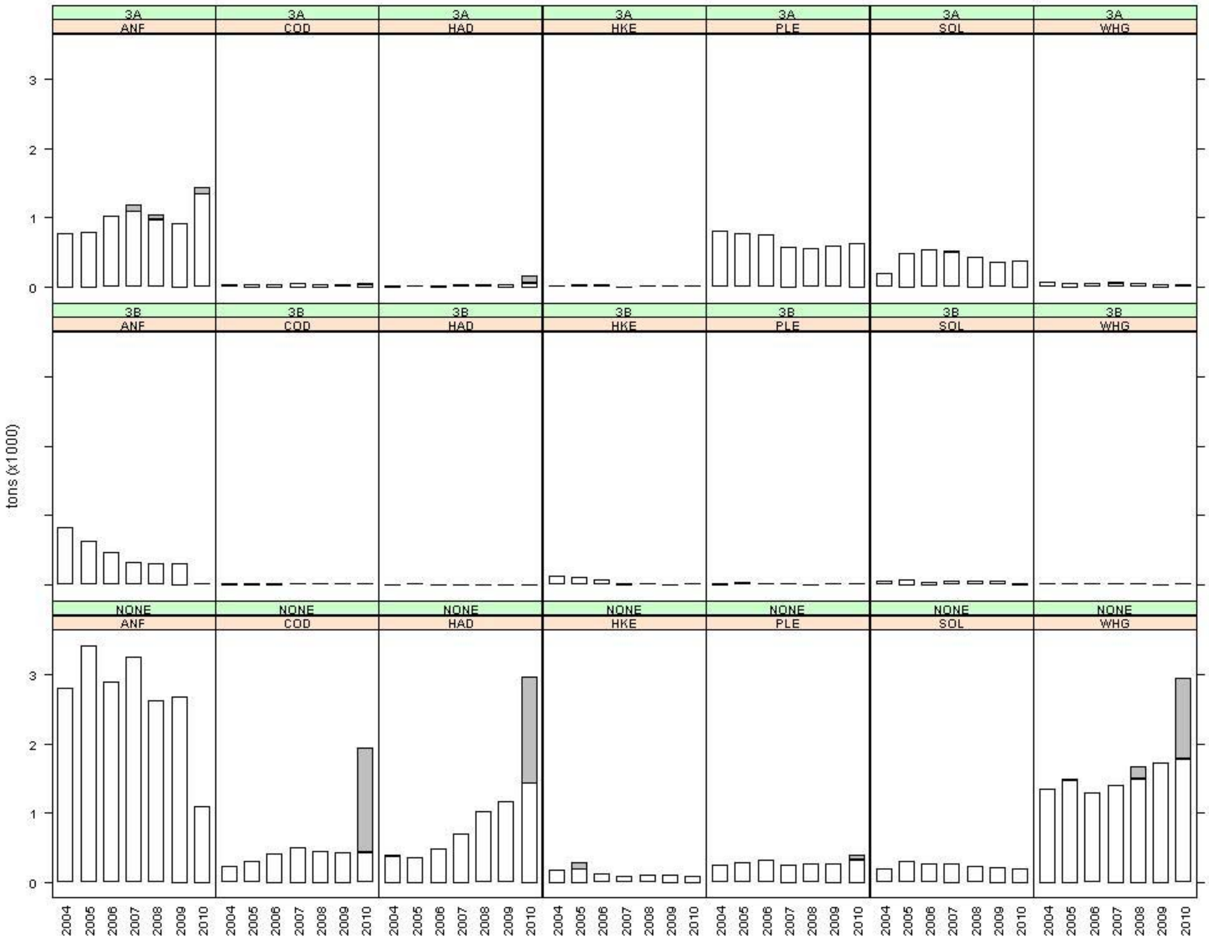


Fig. 8.3.1 – Western Channel - Landings (t) and discard (t) by derogation and species, 2004-2010, as well as for the none regulated gear. Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

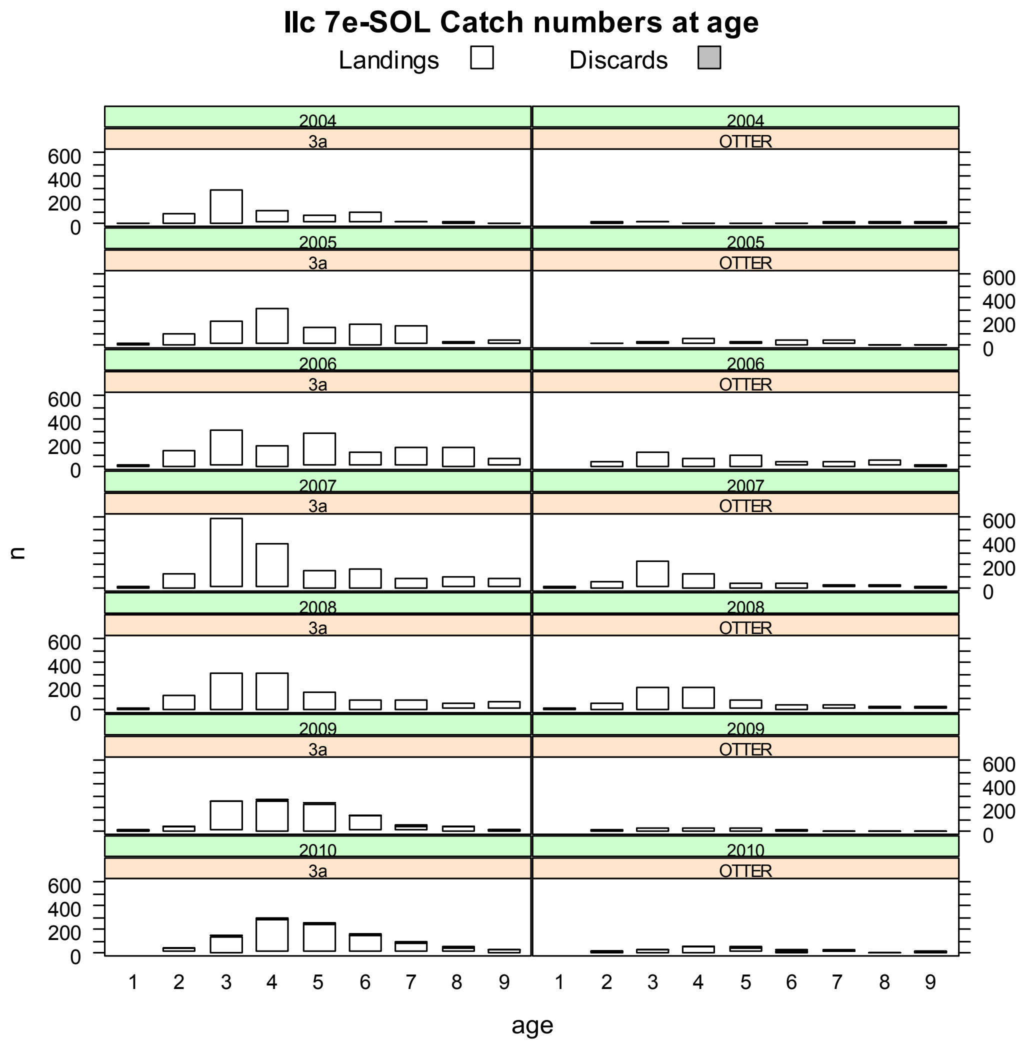


Fig. 8.3.2 – Western Channel - Landings (t) and discard (t) at age by derogation 3a and the main none regulated gear (otter trawl) for sole, 2004-2010. Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

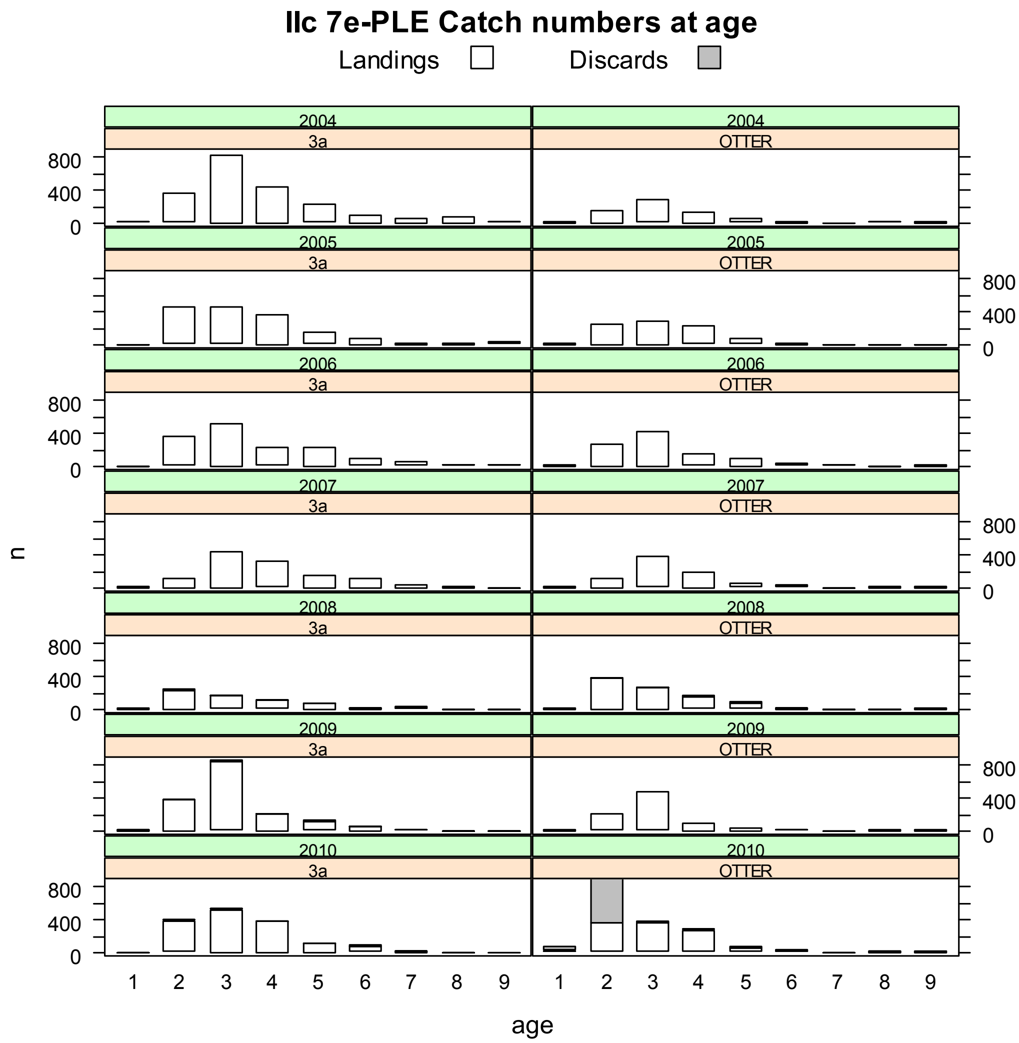


Fig. 8.3.3 – Western Channel - Landings (t) and discard (t) at age by derogation 3a and the main none regulated gear (otter trawl) for plaice, 2004-2010. Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

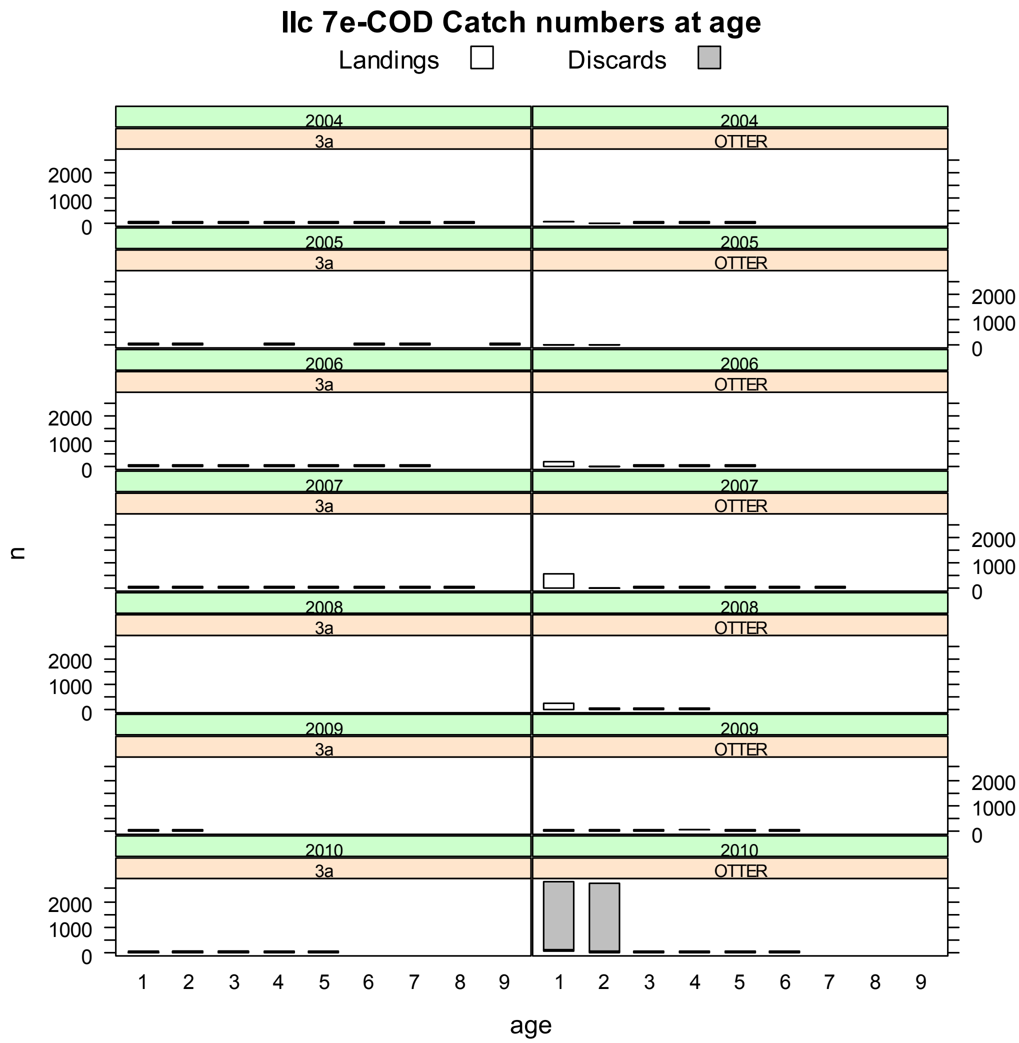


Fig. 8.3.4 – Western Channel - Landings (t) and discard (t) at age by derogation 3a and the main none regulated gear (otter trawl) for cod, 2004-2010. Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

8.4. Trend in CPUE of sole and plaice

Very limited discards are available for sole, plaice and cod, therefore LPUE for sole, plaice and cod are represented in Tables 8.4.1, 8.4.2 and 8.4.3. Figures 8.4.1-6 show CPUE and LPUE trends for sole plaice and cod since 2003. Graphically, only the regulated gears and the most important unregulated gears (otter trawl and dredges) are presented. STECF-EGW wants to point out that CPUE trends e.g. for cod in the Western Channel (Figure 8.4.5) do not necessarily show the correct trend line. As there is only discard information available from otter trawler for 2010, the CPUE seems to increase about fivefold in 2010. However, if discard information would have been available for the period before 2010, CPUE trends are likely not to show that huge increase in 2010.

For sole and plaice the regulated beam trawl fleet (3a) has the highest LPUE's. Sole LPUE's by beam trawlers have increased sharply from 2004 to 2005 and has stabilised around 125 g/(kW*days) since then. Sole LPUE's for static nets (3b) have fluctuated with a gradual increase over the years from 29 g/kW*days in 2006 to 61 g/kW*days in 2010. The LPUE of the main none regulated otter trawl fleet has been stable at around 20 g/kW*days over the whole time series. The plaice LPUE for the regulated beam trawl fleet have decreased gradually from 182 g/kW*days in 2004 to 136 g/kW*days in 2007. In the next 3 years it increases to reach its highest value of 215 g/kW*days. The LPUE from the regulated static gear (3b) has declined gradually from 2005 (21 g/kW*days) to 8 g/kW*days in 2009. The 2010 value is 17 g/kW*days. The LPUE of the main unregulated otter trawl gear has gradually increased from 21 g/kW*days in 2007 to 38 g/kW*days in 2010. The highest LPUE's for cod are obtained by the unregulated otter trawl, increasing from 20 g/kW*days in 2004 to about 50 g/kW*days in the last 3 years. The LPUE of the beam trawlers (3a) fluctuated around 10 g/kW*days over the whole time series, whereas the LPUE of the static nets (3b) increased from 10 g/kW*days to 24 g/kW*days in the last 3 years.

Table 8.4.1 – Western Channel - Sole CPUE (g/(kW*days)) by derogation and year, 2004-2010. Note: Discard information for area 7e area sparse and therefore LPUE is provided in the table. (CPUE is presented in the figures).

ANNEX	SPECIES	REG AREA COD	REG GEAR	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
IIc	SOL	7e	3a	none	42	113	126	118	119	128	129	125
IIc	SOL	7e	3b	none	33	63	29	48	62	65	53	61
IIc	SOL	7e	BEAM	none	82	197	100	0	0	48	26	34
IIc	SOL	7e	DEM_SEINE	none			0		0	0	0	0
IIc	SOL	7e	DREDGE	none	3	5	4	5	8	6	6	7
IIc	SOL	7e	GILL	none	4	7	0	0	0	2	5	2
IIc	SOL	7e	LONGLINE	none	0	0	0	0	0	0	0	0
IIc	SOL	7e	none	none	59	52	94	0	0	0	0	0
IIc	SOL	7e	OTTER	none	15	20	20	20	23	22	19	21
IIc	SOL	7e	PEL_SEINE	none					0	0	0	0
IIc	SOL	7e	PEL_TRAWL	none	0	0	0	0	0	0	0	0
IIc	SOL	7e	POTS	none	0	1	0	0	0	0	5	2
IIc	SOL	7e	TRAMMEL	none	38	35	0	2	4	4	2	3

Table 8.4.2 – Western Channel - Plaice CPUE (g/(kW*days)) by derogation and year, 2004-2010. Note: Discard information for area 7e area sparse and therefore LPUE is provided in the table. (CPUE is presented in the figures).

ANNEX	SPECIES	REG AREA COD	REG GEAR	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
IIc	PLE	7e	3a	none	182	178	177	136	152	215	215	190
IIc	PLE	7e	3b	none	12	21	9	7	5	8	17	9
IIc	PLE	7e	BEAM	none	82	61	100	332	0	0	0	0
IIc	PLE	7e	DEM_SEINE	none		0	0	0	0	10	6	6
IIc	PLE	7e	DREDGE	none	2	2	2	1	2	2	1	2
IIc	PLE	7e	GILL	none	0	1	0	0	0	2	2	1
IIc	PLE	7e	LONGLINE	none	0	0	0	0	0	0	0	0
IIc	PLE	7e	none	none	30	0		0	0	0	0	0
IIc	PLE	7e	OTTER	none	21	21	26	21	30	30	38	33
IIc	PLE	7e	PEL_SEINE	none				0	0	0	0	0
IIc	PLE	7e	PEL_TRAWL	none	0	0	0	0	0	0	0	0
IIc	PLE	7e	POTS	none	0	0	0	0	0	0	0	0
IIc	PLE	7e	TRAMMEL	none	0	9	0	0	2	2	0	1

Table 8.4.3 – Western Channel - Cod CPUE (g/(kW*days)) by derogation and year, 2004-2010. Note: Discard information for area 7e area sparse and therefore LPUE is provided in the table. (CPUE is presented in the figures).

ANNEX	SPECIES	REG ARE/	REG GEAI	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
IIc	COD	7e	3a	none	7	7	9	12	10	10	10	10
IIc	COD	7e	3b	none	11	12	12	14	10	18	24	16
IIc	COD	7e	BEAM	none	0	0	0		0	0	0	0
IIc	COD	7e	DEM_SEIN	none			5	6	0	16	19	15
IIc	COD	7e	DREDGE	none	0	0	0	0	0	0	1	1
IIc	COD	7e	GILL	none	6	4	7	4	8	9	8	8
IIc	COD	7e	LONGLINE	none	8	0	26	2	3	4	0	2
IIc	COD	7e	none	none				0	0	0	0	0
IIc	COD	7e	OTTER	none	20	25	33	42	52	48	48	49
IIc	COD	7e	PEL_SEIN	none					0	0	0	0
IIc	COD	7e	PEL_TRAV	none	0	0	0	0	0	0	2	1
IIc	COD	7e	POTS	none	0	0	0	0	0	0	0	0
IIc	COD	7e	TRAMMEL	none	8	3	5	3	6	6	11	8

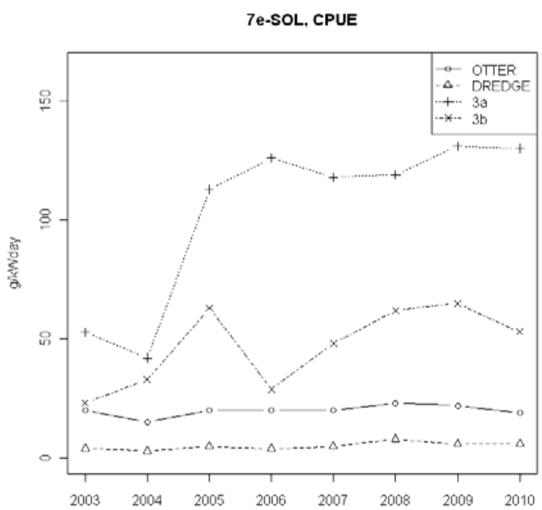


Figure 8.4.1- Western Channel - Sole – CPUE (g/(KW*days)) by derogation and year, 2003-2010.

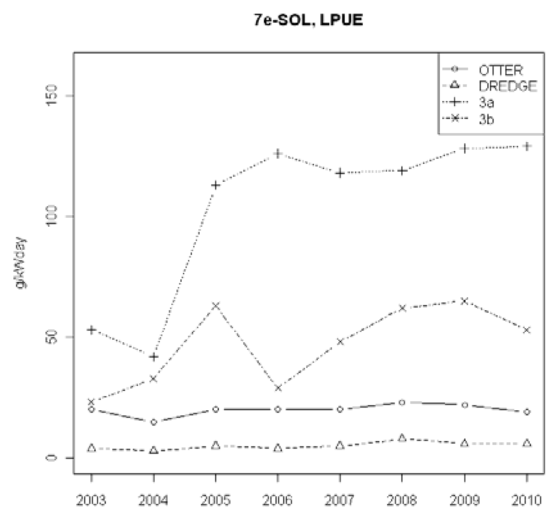


Figure 8.4.2- Western Channel - Sole – LPUE (g/(KW*days)) by derogation and year, 2003-2010

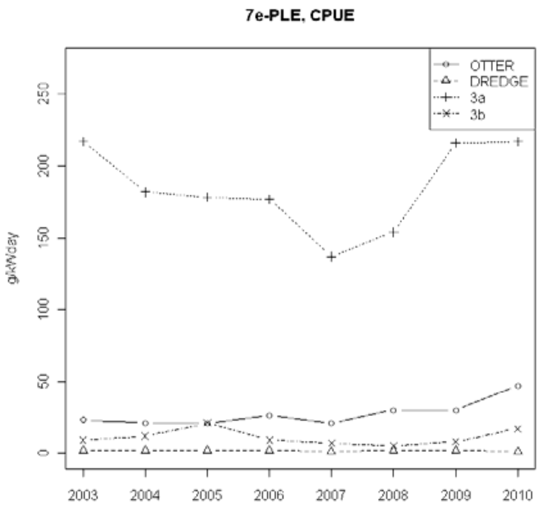


Figure 8.4.3- Western Channel - Plaice – CPUE (g/(KW*days)) by derogation and year, 2003-2010.

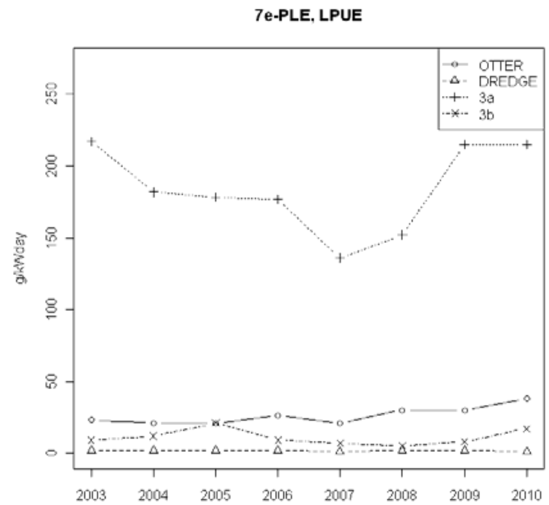


Figure 8.4.4- Western Channel - Plaice – LPUE (g/(KW*days)) by derogation and year, 2003-2010.

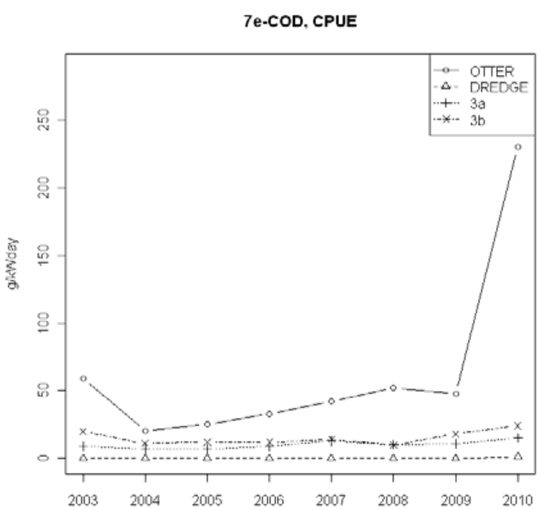


Figure 8.4.5- Western Channel - Cod – CPUE (g/(KW*days)) by derogation and year, 2003-2010.

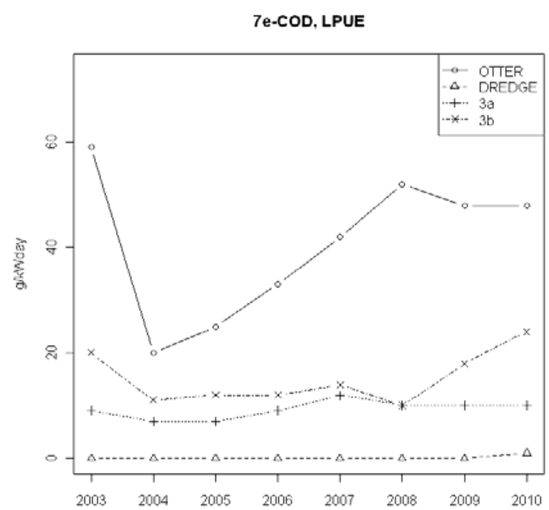


Figure 8.4.6- Western Channel - Cod – LPUE (g/(KW*days)) by derogation and year, 2003-2010.

8.5. Ranked derogations according to relative contributions to sole catches

The relative contribution of sole weights in the catch (Table 8.5.1) shows an increase from 2003 to 2006 and a stabilization afterwards for the dominating beam trawls (3a), which coincides with a decrease of the category “none”, mainly otter trawls which are not effort regulated in Annex IIc. STECF-EWG notes however that this otter trawl fleet is generally responsible for about 30% of the estimated sole and plaice catches in weight and about 85% of the cod catches in weight (see also section 8.6). The static nets with mesh size <220 mm (3b) are taking around 6-21% of sole catches in weight. There is no difference in ranking of the derogations according to the year 2010 or the average of 2008-2010.

Table 8.5.1 - Western Channel - Ranked derogations according to relative sole catches in weight (t) 2004-2010. Ranking is according to the year 2010 and the average 2008-2010.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	Avg.2008-2010
IIc	7e	SOL	3a	0.42	0.44	0.57	0.63	0.61	0.61	0.56	0.63	0.60
IIc	7e	SOL	none	0.51	0.44	0.34	0.31	0.33	0.32	0.35	0.33	0.33
IIc	7e	SOL	3b	0.13	0.21	0.13	0.07	0.09	0.09	0.12	0.06	0.09

8.6. Unregulated gear in management area 7e

Category ‘none’ represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in terms of effort (kW*Days at sea) and cod, sole and plaice catches.

The effort of the unregulated gear group ‘None’ has been around 85% of the overall nominal effort for the whole time series.

Table 8.6.1 shows the disaggregation of the ‘none’ category into the different gears categories. Effort by otter trawl is by far the dominant gear category with percentages in excess of 43% for all years. Dredges contribute around 25%. Pelagic trawl and pots contribute each about 10% to the overall effort of the non regulated gear. The rest of the gears also account for about 10%.

Table 8.6.2 provides the cod catches of the unregulated gear types. The cod catches of the unregulated gear are in excess of 83% of the overall cod catches in area 7e for each year of the data series (2004-2010). The otter trawl fleet is taking the bulk of these catches with percentages in excess of 81%. For 2010 the unregulated gears account for 91% of the overall cod catches where the otter trawl fleet is responsible for 84% of these catches.

Table 8.6.3 provides the sole catches of the unregulated gear types. The sole catches of the unregulated gear are in excess of 32% of the overall sole catches in area 7e for each year of the data series (2004-2010). The otter trawl fleet is the main fleet involved with percentages in excess of 26%. For 2010 the unregulated gears account for 33% of the overall sole catches where the otter trawl fleet is responsible for 26% of these catches.

Table 8.6.4 provides the plaice catches of the unregulated gear types. The plaice catches of the unregulated gear are in excess of 23% of the overall plaice catches in area 7e for each year of the data series (2004-2010). The otter trawl fleet is the main fleet involved with percentages in excess of 22%. For 2010 the unregulated gears account for 34% of the overall plaice catches where the otter trawl fleet is responsible for 33% of these catches.

Again STECF-EWG would like to mention that there is little information on discards for area 7e and therefore that the above percentages are more likely to be representative of landings than of total catches.

Table. 8.6.1. Western Channel Unregulated gear (category none-none) effort (kW*Days) by gear type, 2004-2010.

ANNEX	REG_AREA	REG_GEAR	REG GEAR COD	2004	2005	2006	2007	2008	2009	2010
IIc	7e	none	OTTER	11306475	11989022	12028972	11848608	8475537	8576314	8279978
IIc	7e	none	DREDGE	5637002	5602368	5903594	6083728	4752272	5121171	4096901
IIc	7e	none	PEL_TRAWL	1830023	1474970	2163387	2131950	2020287	1410938	2458100
IIc	7e	none	POTS	2801196	2784755	3141625	2718668	1230013	1316333	1959298
IIc	7e	none	DEM_SEINE	488105	674577	534836	781892	658756	665549	661402
IIc	7e	none	GILL	52316	94168	202941	166784	129716	307752	537514
IIc	7e	none	TRAMMEL	131206	346504	436467	626072	486195	475625	522126
IIc	7e	none	LONGLINE	193853	183887	295531	207190	175282	174967	321953
IIc	7e	none	PEL_SEINE	382787	441367	615657	587251	312345	277793	318936
IIc	7e	none	BEAM	12234	65823	9980	6031		20698	38302
IIc	7e	none	none	33746	76435	42606	12474	18883	18883	
Sum				**22868943**	**23733876**	**25375596**	**25170648**	**18259286**	**18366023**	**19194510**

Table. 8.6.2. Western Channel. Unregulated gear (category none-none) cod (t) catch composition by gear type, 2004-2010. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010
IIc	7e	COD	none	OTTER	223	298	391	503	438	415	399
IIc	7e	COD	none	DEM_SEINE			1	1		5	10
IIc	7e	COD	none	TRAMMEL	4	3	4	3	5	7	6
IIc	7e	COD	none	DREDGE	1	1	2	2	4	3	6
IIc	7e	COD	none	GILL	0	0	0	1	2	2	5
IIc	7e	COD	none	PEL_TRAWL	0	0	0	0	0	0	5
IIc	7e	COD	none	BEAM	0	0	0	0	0	0	1
IIc	7e	COD	none	LONGLINE	0	0	0			0	0
IIc	7e	COD	none	PEL_SEINE	3	0	17	1	1	1	0
IIc	7e	COD	none	POTS							0
IIc	7e	COD	none	none				0			
Sum					**231**	**302**	**415**	**511**	**450**	**433**	**432**

Table. 8.6.3. Western Chanel. Unregulated gear (category none-none) sole (t) catch composition by gear type, 2004-2010. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010
IIc	7e	SOL	none	OTTER	165	235	237	240	193	187	157
IIc	7e	SOL	none	DREDGE	17	29	26	31	39	32	23
IIc	7e	SOL	none	POTS	0	3	0	1	0	0	10
IIc	7e	SOL	none	GILL	2	5	0	0	0	1	3
IIc	7e	SOL	none	PEL_TRAWL	1	13	1	0		1	1
IIc	7e	SOL	none	TRAMMEL	0	0	0	0	0	0	1
IIc	7e	SOL	none	BEAM	5	12	0	1	2	2	1
IIc	7e	SOL	none	DEM_SEINE			0				0
IIc	7e	SOL	none	LONGLINE	0	0	0	0	0	0	0
IIc	7e	SOL	none	PEL_SEINE							0
IIc	7e	SOL	none	none	2	4	4	0	0	0	
Sum					**192**	**301**	**268**	**273**	**234**	**223**	**196**

Table. 8.6.4. Western Chanel. Unregulated gear (category none-none) plaice (t) catch composition by gear type, 2004-2010. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_ARE	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010
IIc	7e	PLE	none	OTTER	232	258	311	247	252	261	316
IIc	7e	PLE	none	DREDGE	9	14	10	8	8	8	5
IIc	7e	PLE	none	DEM_SEINE		0	0	0	0	3	4
IIc	7e	PLE	none	GILL	2	4	1	2		0	1
IIc	7e	PLE	none	BEAM	0	1	0	0	0	1	1
IIc	7e	PLE	none	LONGLINE	0	0	0	0	0	0	0
IIc	7e	PLE	none	PEL_SEINE				0			0
IIc	7e	PLE	none	PEL_TRAWL	0	0	0	0	0	0	0
IIc	7e	PLE	none	POTS	0	0	0	0	0	0	0
IIc	7e	PLE	none	TRAMMEL	0	3	0	0	1	1	0
IIc	7e	PLE	none	none	1	0		0	0	0	
Sum					**244**	**280**	**322**	**257**	**261**	**274**	**327**

8.7. Fishing effort and catches (landings and discards) of sole and associated species of vessels <10m

8.7.1. General considerations regarding catches of vessels <10m

It should be noted that not all countries have submitted information and that the total figures are therefore likely to give an underestimation of effort and catches of this vessel category.

Table 8.7.1 provides an overview of the effort deployed by vessels >10m (regulated and non regulated gear) and vessels <10m in the Western Channel for the period 2004-2010. The effort from the vessels <10m fluctuates between 13% and 22% of the effort deployed by the vessels >10m.

Table 8.7.2 gives a preliminary overview of the catches of some main species (anglerfish, cod, haddock, hake, *Nephrops*, plaice, saithe, sole and whiting in area 7e for vessels <10m (2004-2010). STECF-EWG would like to mention that although these figures are underestimates, they indicate that between 7% and 15% of the sole catches are taken by vessels < 10m. For other species with substantial catches, the percentages vary between 4% and 7% for anglerfish, between 5% and 18% for cod, between 6% and 12% for plaice and between 3% and 8% for whiting. For the other species listed, the percentages vary between 1% and 4%, where in some cases the catches are very small.

Table 8.7.1 – Western Channel - Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 57/2011), unregulated gear and vessels <10m, 2004-2010.

ANNEX	REG AREA (	REG GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010
IIc	7e	3a	none	4402055	4316077	4209145	4199088	3603323	2696024	2914372
IIc	7e	3b	none	1442948	1124945	1391244	1026522	729036	718465	413797
IIc	7e	none	none	22835197	23657441	25332990	25158174	18240403	18347140	19194510
Sum_O10m	**7e**			**28713946**	**29174898**	**30975985**	**30396258**	**22591645**	**21780512**	**22522679**
Sum_U10m	**7e**			**4725226**	**3699800**	**5719680**	**5501293**	**4335239**	**3892587**	**4897943**
%-U10m	**7e**			**16**	**13**	**18**	**18**	**19**	**18**	**22**

Table 8.7.2 – Western Channel – Overview of anglerfish, cod, haddock, hake, nephrops, plaice, saithe, sole and whiting catches by vessels <10m, 2004-2010.

REG_AREA	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010
7e	3a	ANF	500	769	795	1013	1086	959	916	1344
7e	3b	ANF	635	824	618	459	318	302	303	12
7e	none	ANF	2505	2805	3412	2891	3256	2619	2688	1071
Sum_O10m		ANF	3640	4398	4825	4363	4660	3880	3907	2427
Sum_U10m		ANF	249	262	217	199	286	237	225	179
%-U10m			**7**	**6**	**4**	**5**	**6**	**6**	**6**	**7**
7e	3a	COD	33	29	32	36	49	37	28	30
7e	3b	COD	26	16	15	16	13	8	13	10
7e	none	COD	669	231	302	416	511	451	433	430
Sum_O10m		COD	728	276	349	468	573	496	474	470
Sum_U10m		COD	39	26	17	40	57	35	46	83
%-U10m			**5**	**9**	**5**	**9**	**10**	**7**	**10**	**18**
7e	3a	HAD	18	14	10	17	22	30	38	55
7e	3b	HAD	4	4	8	3	2	1	1	4
7e	none	HAD	708	384	362	492	703	1023	1166	1439
Sum_O10m		HAD	730	402	380	512	727	1054	1205	1498
Sum_U10m		HAD	22	3	7	7	27	37	28	58
%-U10m			**3**	**1**	**2**	**1**	**4**	**4**	**2**	**4**
7e	3a	HKE	5	6	6	6	3	10	12	7
7e	3b	HKE	172	114	98	60	19	9	3	7
7e	none	HKE	235	179	205	117	88	102	109	77
Sum_O10m		HKE	412	299	309	183	110	121	124	91
Sum_U10m		HKE	2	1	2	1	1	2	3	4
%-U10m			**0**	**0**	**1**	**1**	**1**	**2**	**2**	**4**
7e	3a	NEP	0	0	0	0	0	0	0	0
7e	3b	NEP	0	0	0	0	0	0	0	0
7e	none	NEP	4	8	13	6	10	9	9	16
Sum_O10m		NEP	4	8	13	6	10	9	9	16
Sum_U10m		NEP	0	0	0	0	0	0	4	0
%-U10m			**0**	**0**	**0**	**0**	**0**	**0**	**44**	**0**
7e	3a	PLE	820	801	767	743	571	547	581	612
7e	3b	PLE	11	19	24	13	7	4	6	7
7e	none	PLE	264	242	279	322	255	261	274	324
Sum_O10m		PLE	1095	1062	1070	1078	833	812	861	943
Sum_U10m		PLE	95	82	66	128	104	75	68	103
%-U10m			**9**	**8**	**6**	**12**	**12**	**9**	**8**	**11**
7e	3a	POK	0	1	0	0	0	0	0	0
7e	3b	POK	6	11	17	3	1	1	3	5
7e	none	POK	6	5	2	3	1	1	1	16
Sum_O10m		POK	12	17	19	6	2	2	4	21
Sum_U10m		POK	1	1	1	0	0	0	2	1
%-U10m			**8**	**6**	**5**	**0**	**0**	**0**	**50**	**5**
7e	3a	SOL	201	184	486	530	497	430	347	376
7e	3b	SOL	29	49	71	41	49	45	48	22
7e	none	SOL	247	192	300	268	273	232	222	197
Sum_O10m		SOL	477	425	857	839	819	707	617	595
Sum_U10m		SOL	71	58	73	85	85	52	45	68
%-U10m			**15**	**14**	**9**	**10**	**10**	**7**	**7**	**11**
7e	3a	WHG	72	61	53	45	45	48	38	30
7e	3b	WHG	9	7	5	10	8	7	5	10
7e	none	WHG	1898	1352	1478	1293	1407	1501	1729	1779
Sum_O10m		WHG	1979	1420	1536	1348	1460	1556	1772	1819
Sum_U10m		WHG	111	79	53	71	123	127	141	154
%-U10m			**6**	**6**	**3**	**5**	**8**	**8**	**8**	**8**

8.7.2. Country specific information of vessels <10m

More detailed information for vessels <10 meters were available only from France for the period 2003-2007. This information was presented in the 2008 report and is not repeated here. An update will be provided once new data become available.

8.8. Spatial distribution patterns of effective fishing effort of trawled gears 2003-2010

Figure 8.8.1 shows the spatial distribution of the effective fishing effort for beam trawl fleets with mesh size ≥80mm (3a) during the period 2003 to 2010. The pattern seems similar for the whole period with higher effort deployed south of Devon.

Figure 8.8.2 shows the spatial distribution of the effective fishing effort for static nets with mesh size <220mm (3b) during the period 2003 to 2010. The fishing effort pattern is rather homogeneous over the whole 7e area and full time series with occasional higher densities of activities along the most southern point of the English coast and off the French coast from Saint-Malo .

Figure 8.8.3 shows the spatial distribution of the effective fishing effort for the unregulated beam trawl fleet with no mesh size provided or mesh size < 80mm during the period 2003 to 2010. Since 2008, the effort which was predominantly deployed on the English coast and the French coast north of Cherbourg, has substantially decreased in all rectangles.

Figure 8.8.4 shows the spatial distribution of the effective fishing effort for the unregulated demersal seine during the period 2003 to 2010. The years 2003 and 2004 only indicate activities in 1 rectangle. Since 2005 most effort deployed in the same rectangles off the English coast with a substantial increase in the last 3 years, especially south of Dorset across to the French coast.

Figure 8.8.5 shows the spatial distribution of the effective fishing effort for the unregulated dredges during the period 2003 to 2010. Most effort deployed off the English coast and off the coast of Saint Malo. It should also be noted that for the whole time series dredge effort is also deployed, in lower concentrations, over the whole VIIe area.

Figure 8.8.6 shows the spatial distribution of the effective fishing effort for the unregulated gill nets during the period 2003 to 2010. A similar pattern of effort deployment for all years over almost the whole VIIe area, with higher concentrations on the most southern part of the English coast and off the coast of Saint-Malo. In 2010 their appear to be less effort deployed along the French coast.

Figure 8.8.7 shows the spatial distribution of the effective fishing effort for the unregulated longlines during the period 2003 to 2010. Again, a similar pattern of effort deployment for all years over almost the whole VIIe area, with the highest concentrations along the English coast off Brixham.

Figure 8.8.8 shows the spatial distribution of the effective fishing effort for the unregulated otter trawls during the period 2003 to 2010. From 2003 until 2007 a similar pattern of effort deployment over almost the whole VIIe area with higher concentrations along the English coast and off the coast of Saint Malo.

Figure 8.8.9 shows the spatial distribution of the effective fishing effort for the unregulated pelagic seine during the period 2003 to 2010. Very sparce patches of effort deployment, predominantly along the French coast off Brest.

Figure 8.8.10 shows the spatial distribution of the effective fishing effort for the unregulated pelagic trawls during the period 2003 to 2010. A similar pattern of effort deployment for all years over almost the whole VIIe area, with the highest concentrations on the English coast off Brixham.

Figure 8.8.11 shows the spatial distribution of the effective fishing effort for the unregulated pots during the period 2003 to 2010. A similar pattern of effort deployment for all years, predominantly along the English coast and the French coast off Saint Malo.

Figure 8.8.12 shows the spatial distribution of the effective fishing effort for the unregulated trammel nets during the period 2003 to 2010. A similar pattern of effort deployment for all years, with the highest concentrations predominantly off the French coast.

Figure 8.8.13 shows the spatial distribution of the effective fishing effort for the unregulated gear (“none-none”), gears without mesh size given during the period 2003 to 2009.A similar pattern of effort deployment for all years, predominantly off the French coast.

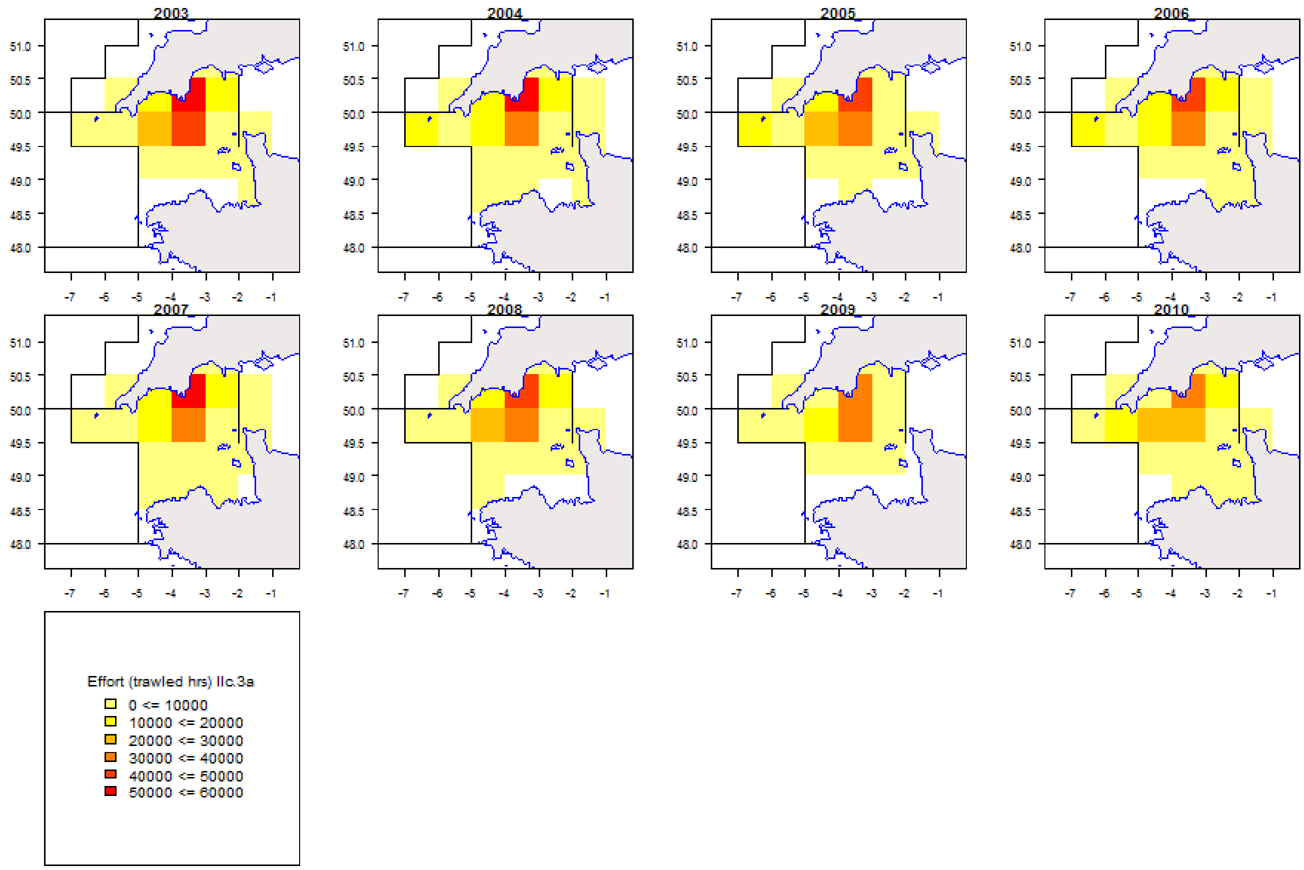


Figure 8.8.1. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Beam trawl fleet with mesh size ≥80 mm(3a), 2003-2010.

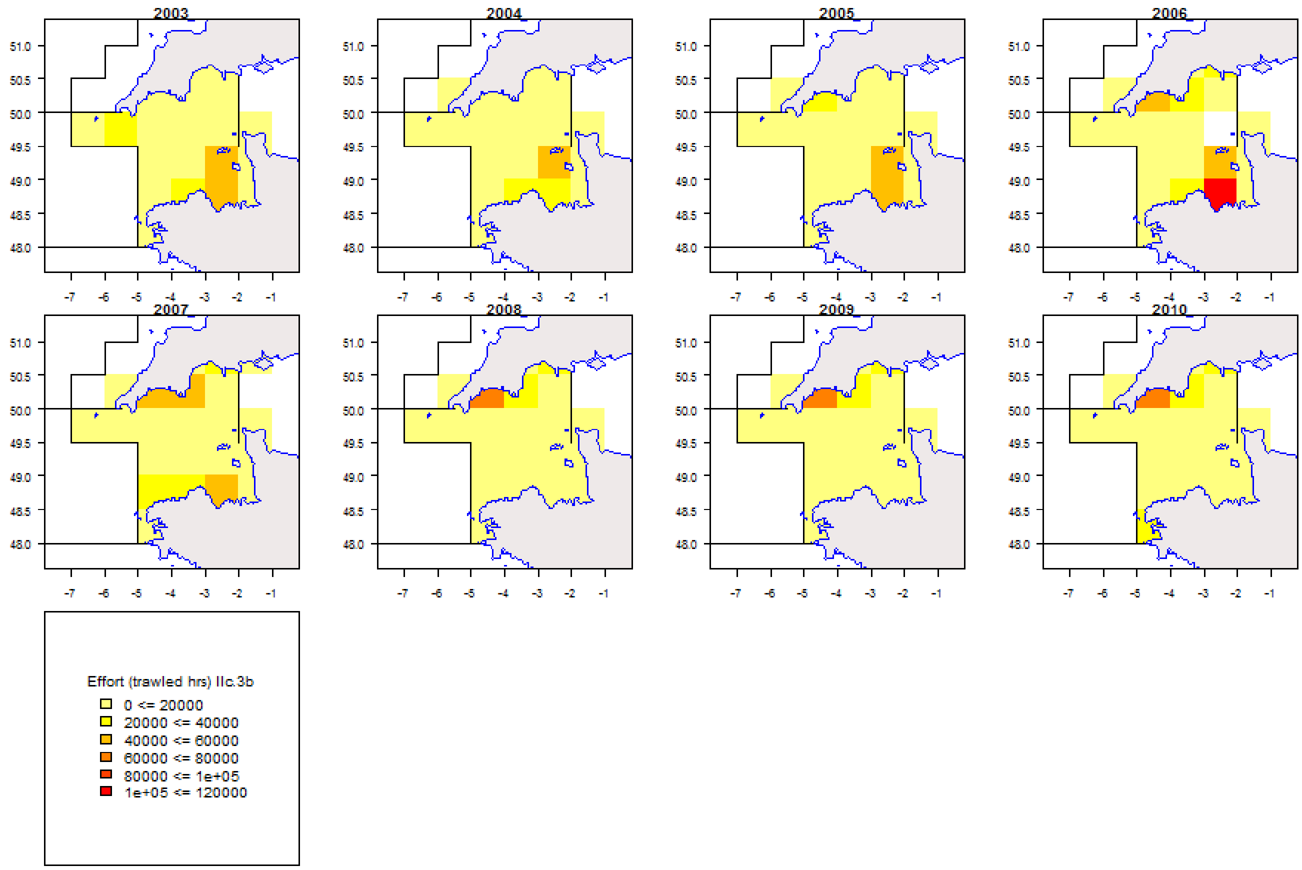


Figure 8.8.2. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for static nets with mesh size <220mm (3b), 2003-2010.

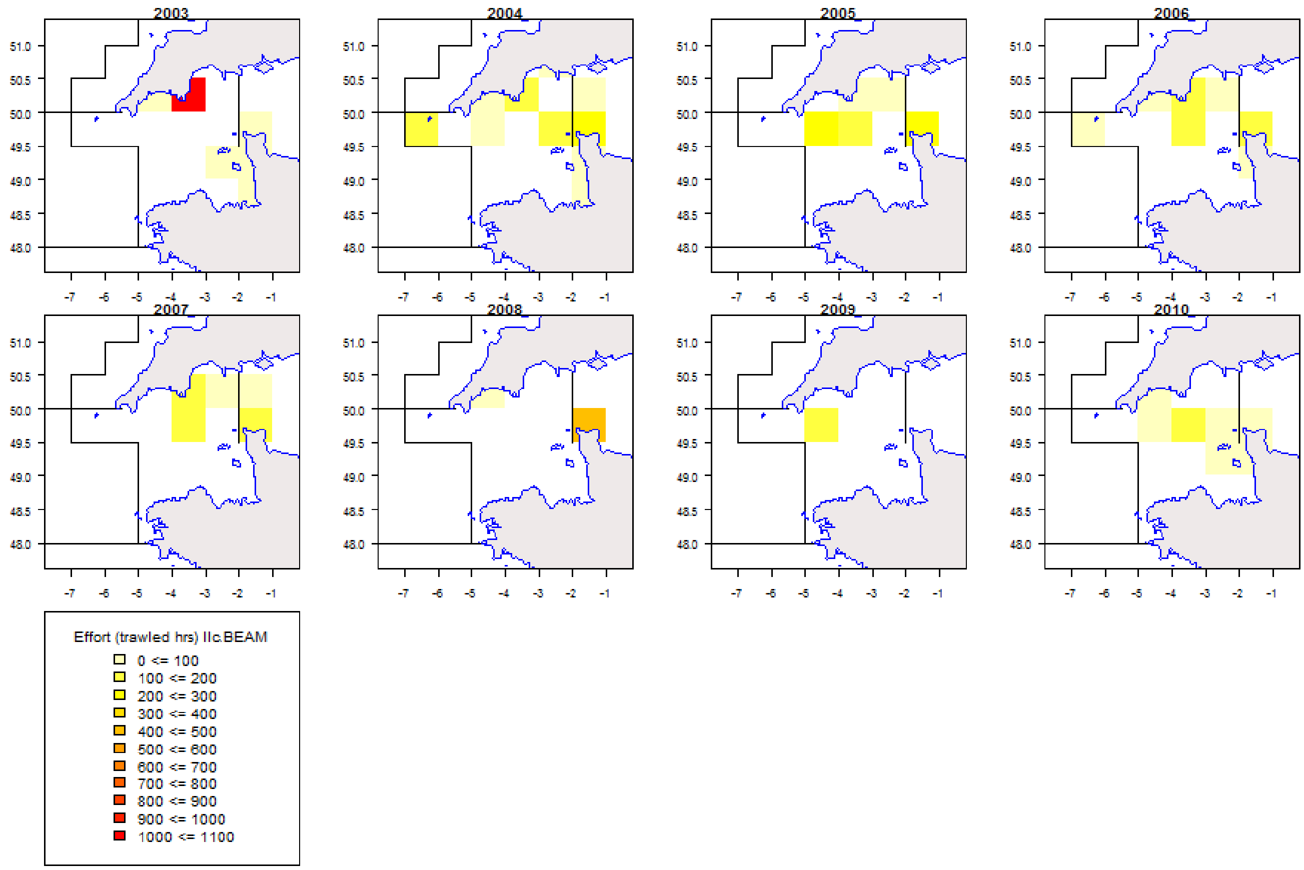


Figure 8.8.3. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Beam trawl fleet with no mesh size provided or mesh size <80 mm, 2003-2010.

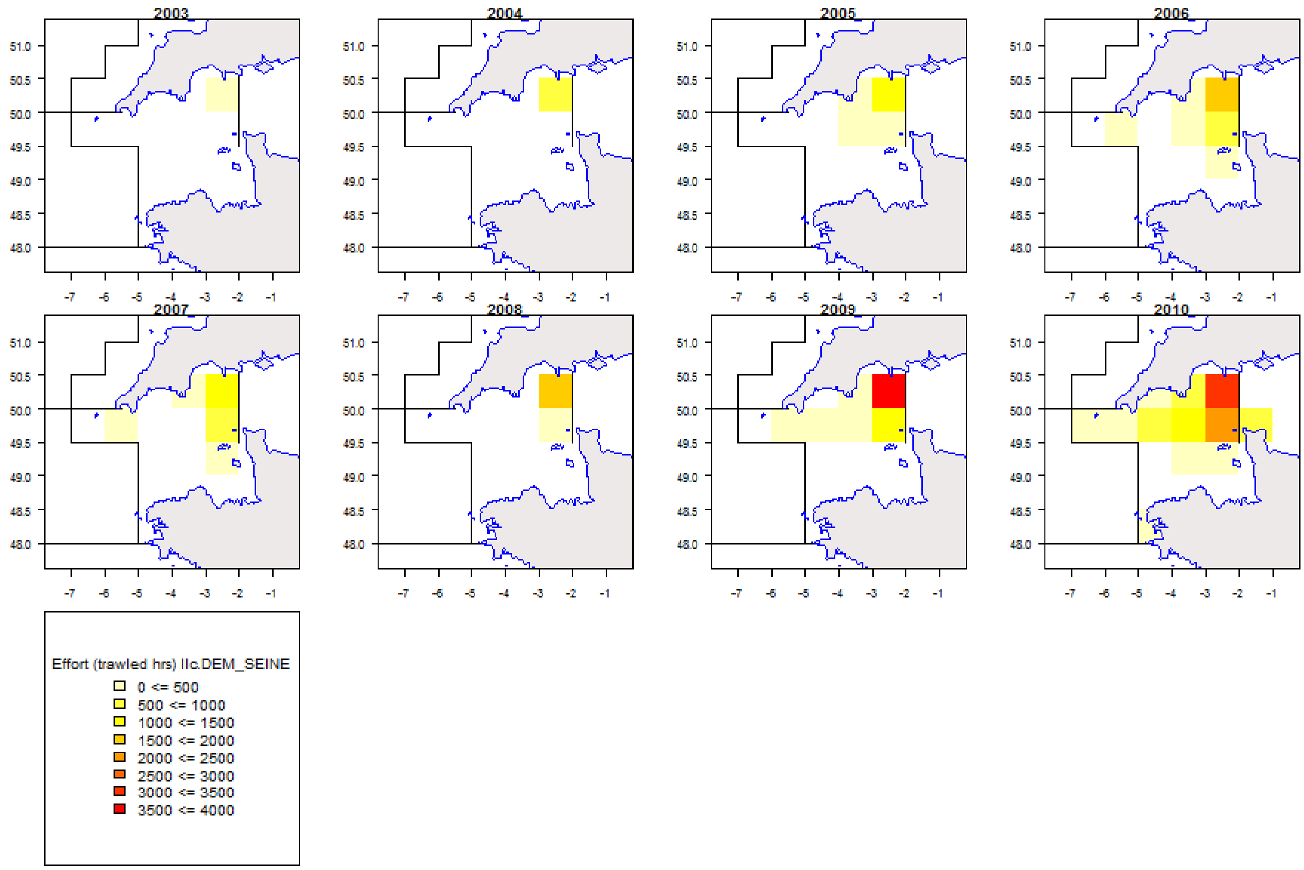


Figure 8.8.4. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Demersal Seine, 2003-2010.

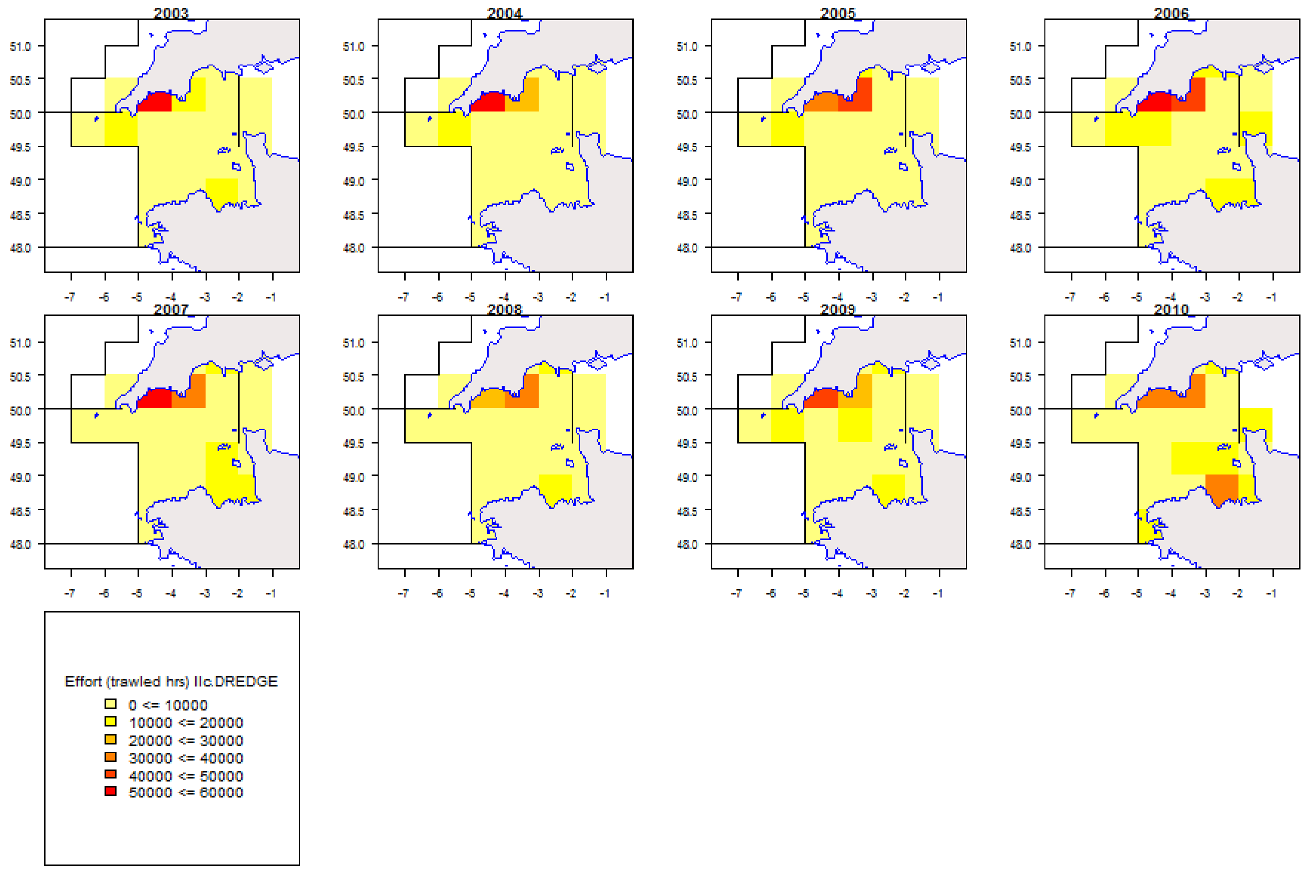


Figure 8.8.5. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Dredges, 2003-2010.

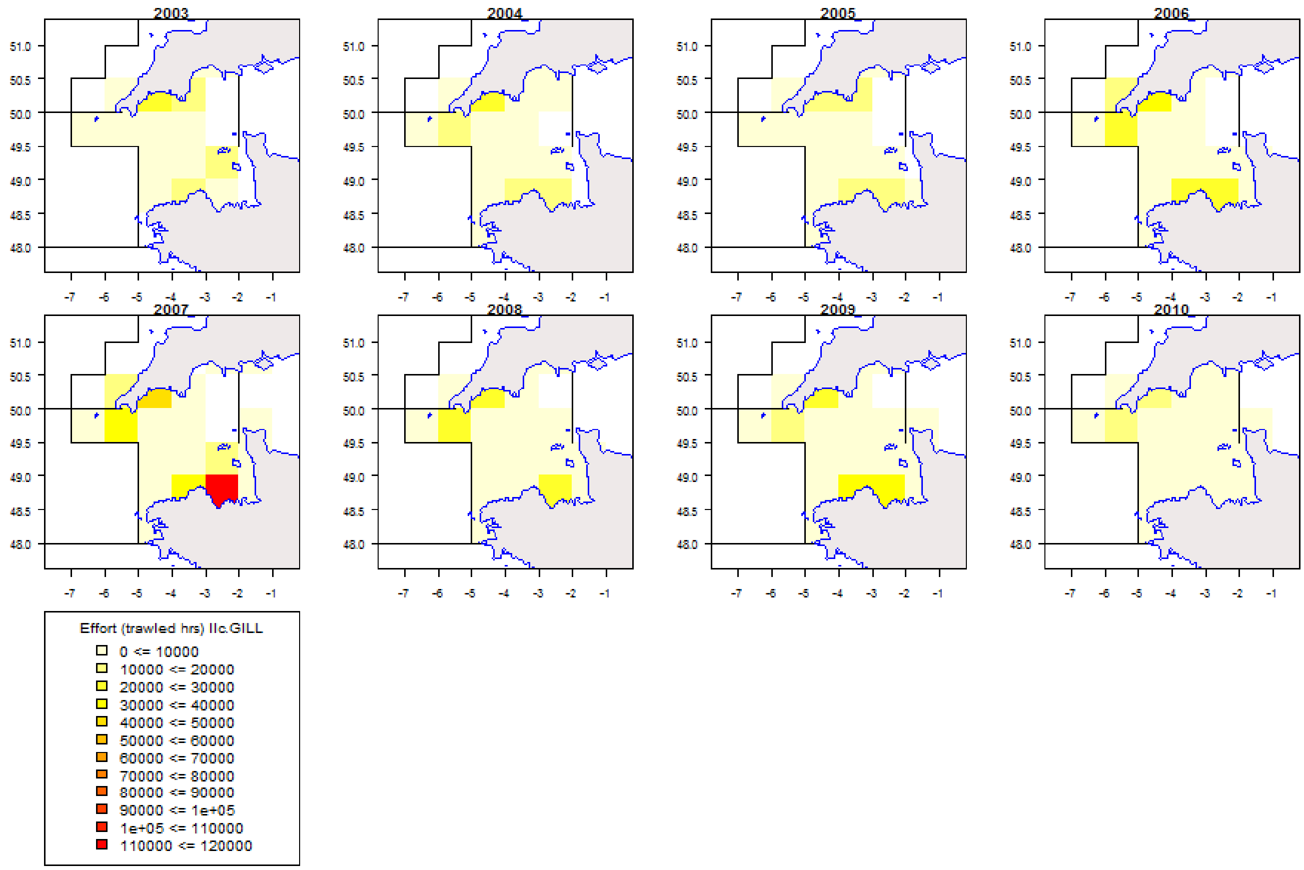


Figure 8.8.6. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Gill nets, 2003-2010.

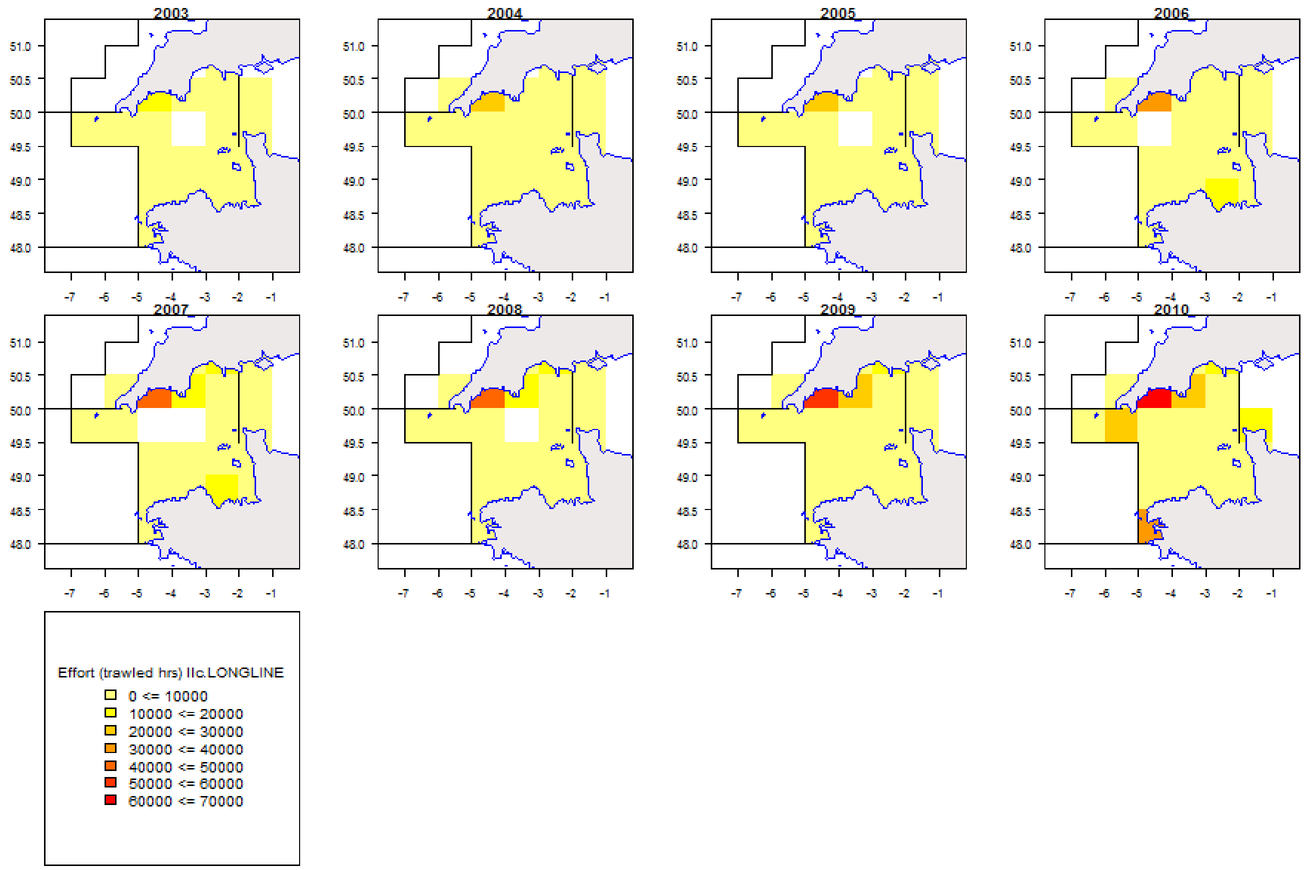


Figure 8.8.7. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Longlines, 2003-2010.

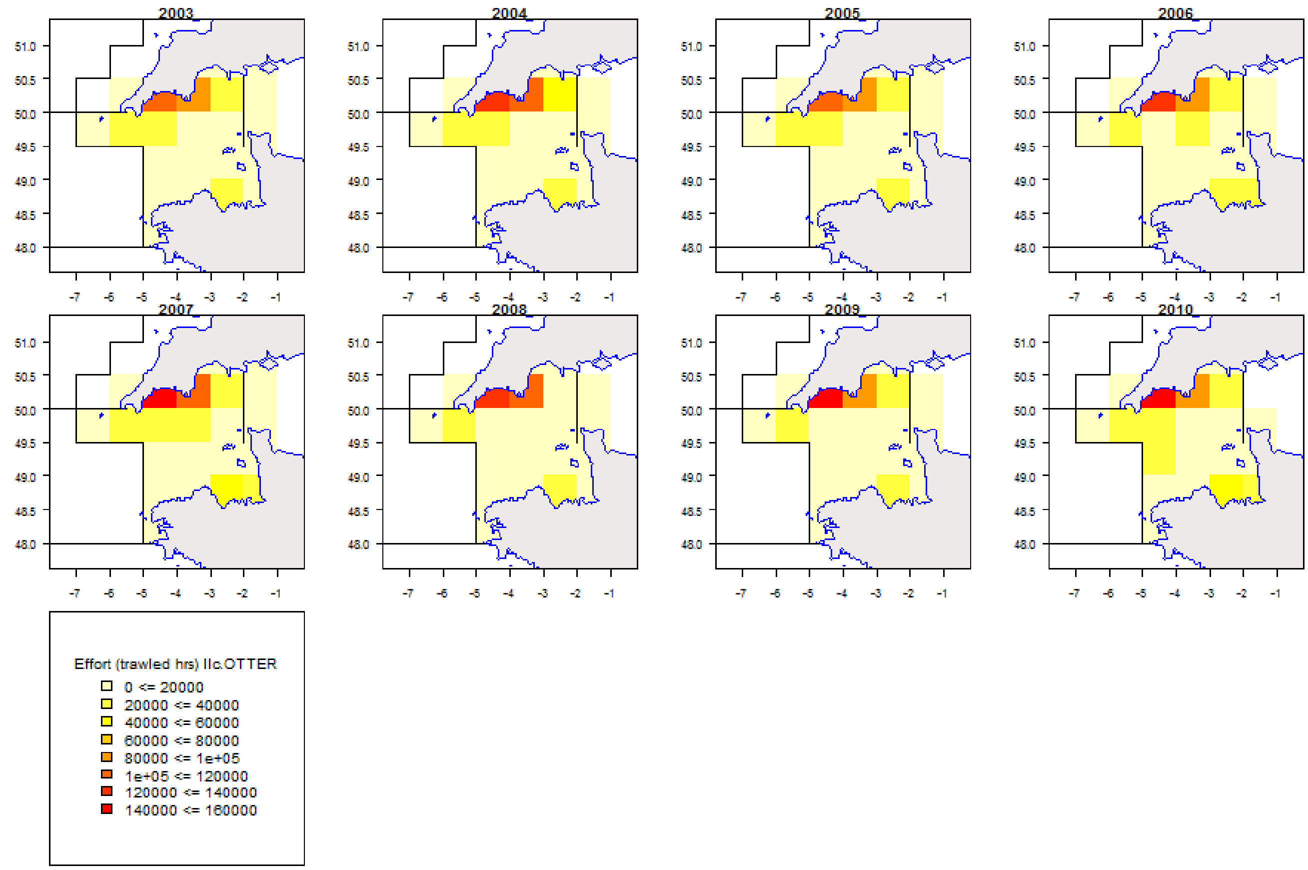


Figure 8.8.8. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Otter Trawl, 2003-2010.

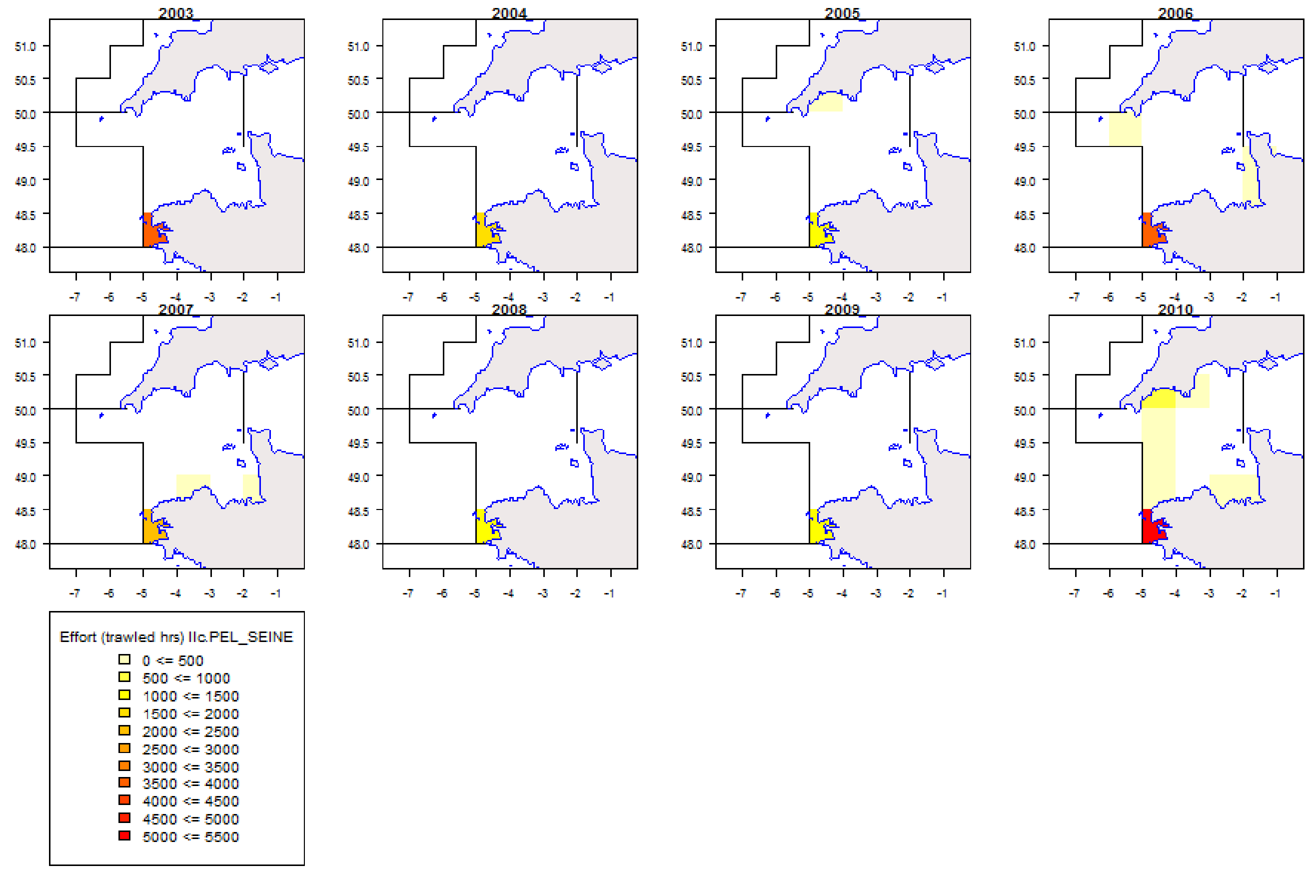


Figure 8.8.9. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Pelagic Seine, 2003-2010.

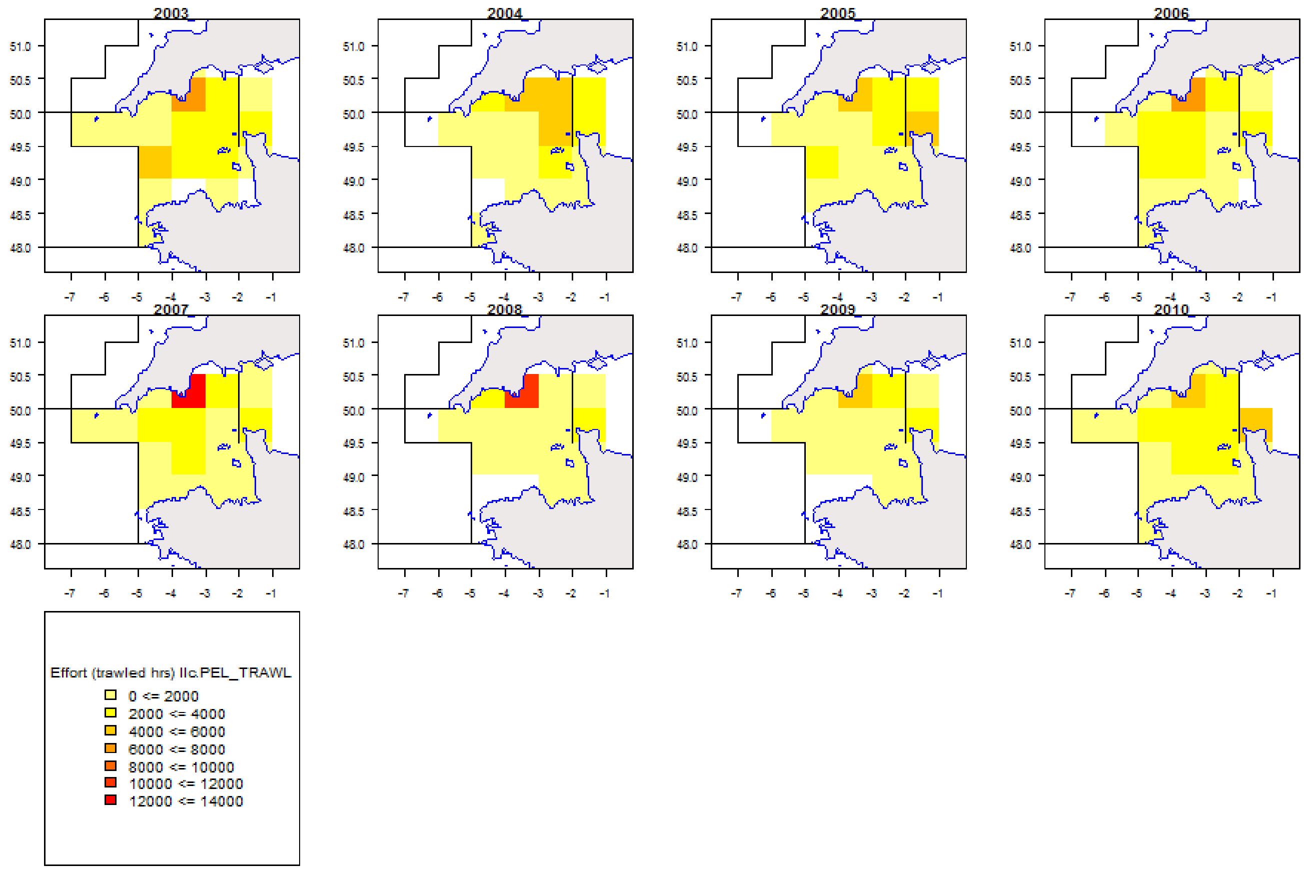


Figure 8.8.10. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Pelagic Trawl, 2003-2010.

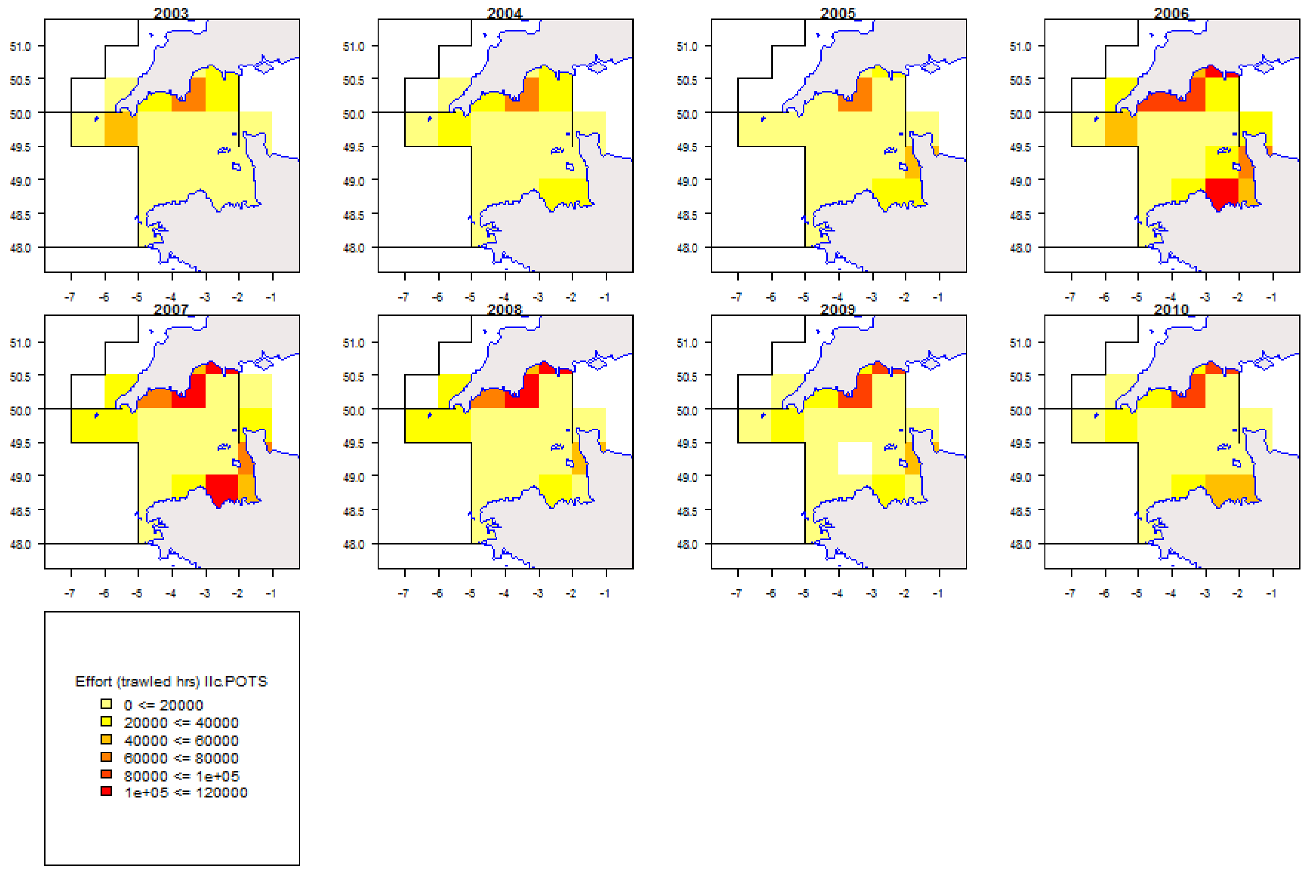


Figure 8.8.11. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Pots, 2003-2010.

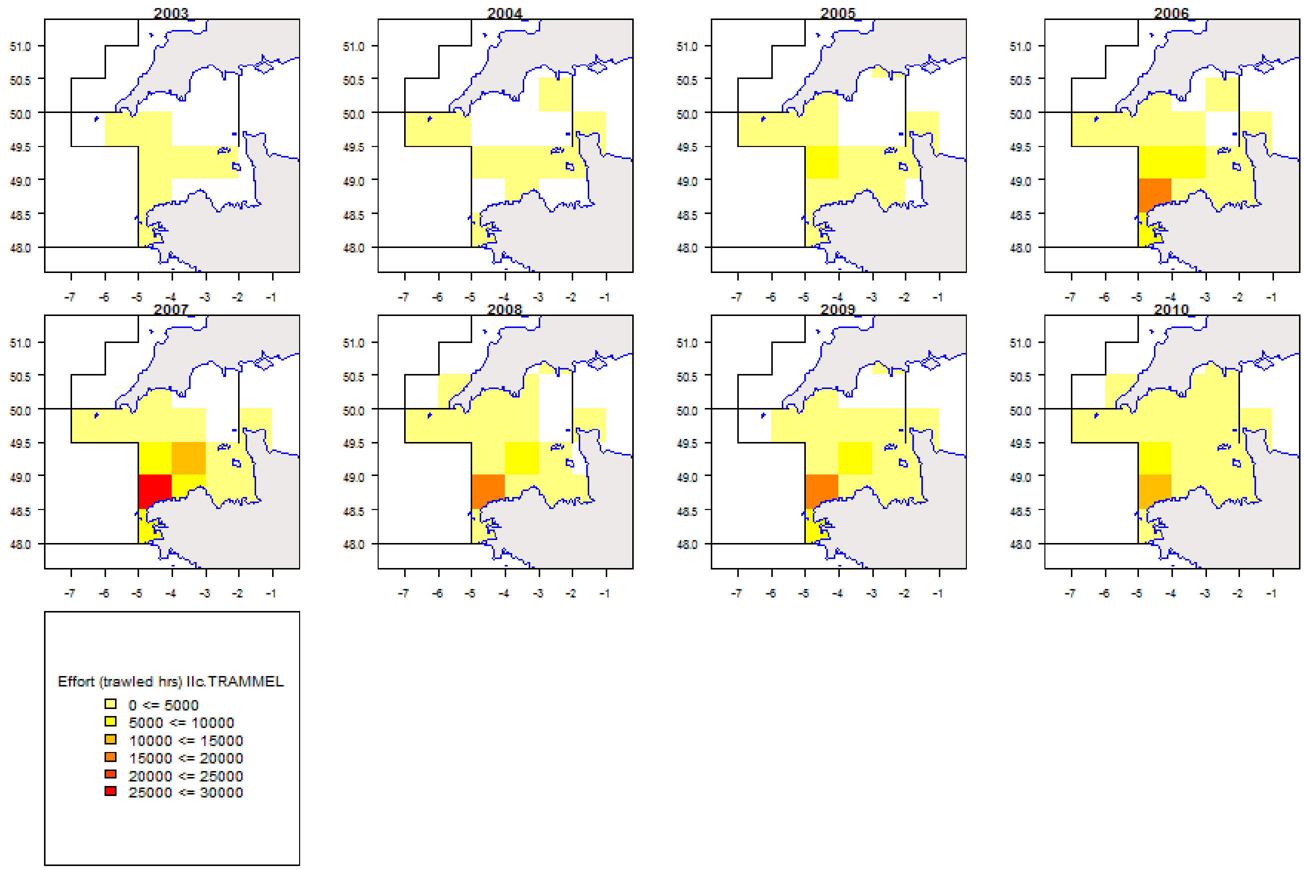


Figure 8.8.12. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Trammel nets, 2003-2010.

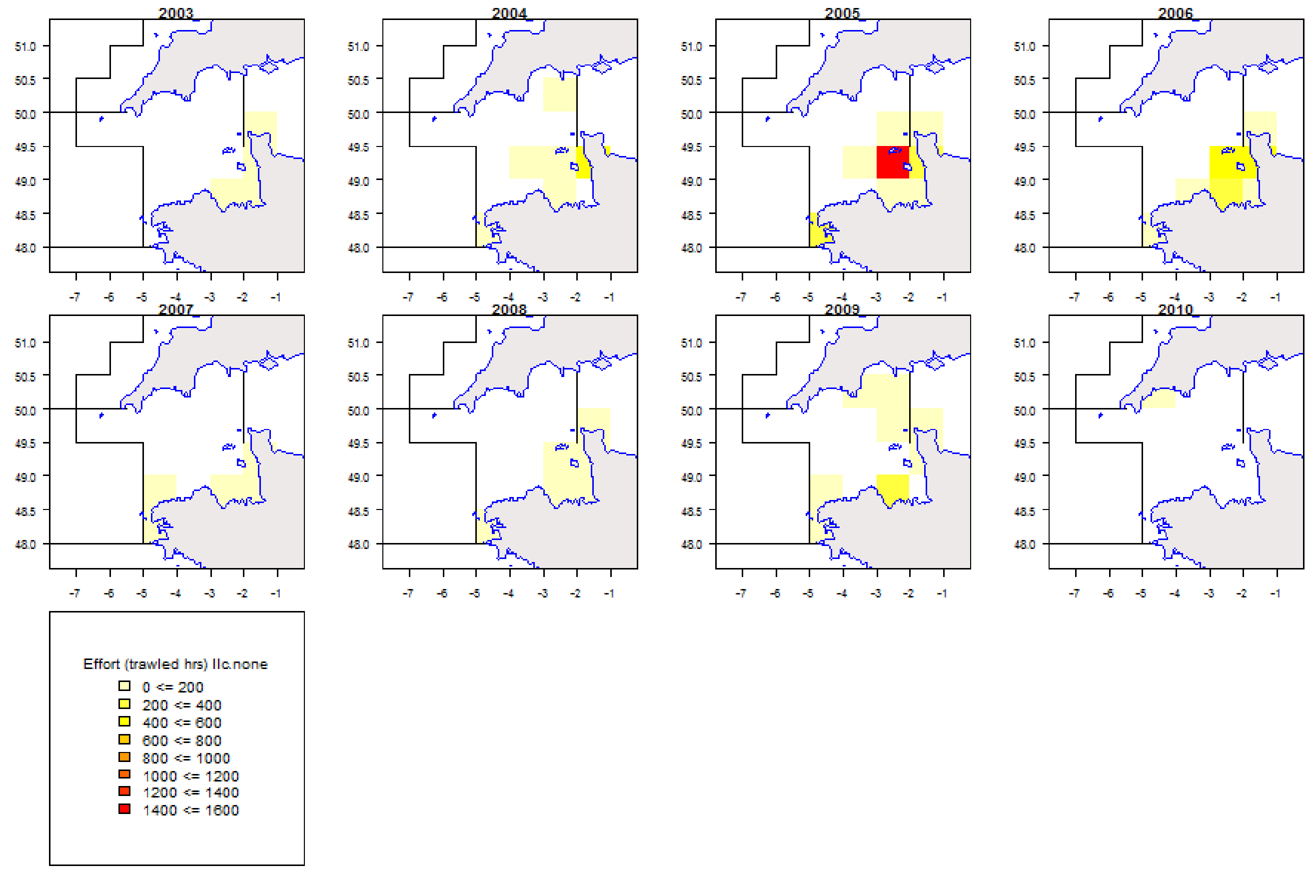


Figure 8.8.13. Western Channel. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for None (“none-none”), gears without mesh size given, 2003-2010.

9. CELTIC SEA

9.1. General

The Celtic Sea (ICES Divisions VIIbc,e-k) is not currently covered by the effort management scheme described under Annex II. However, the recent Commission proposals for the recovery of cod stocks within a revised recovery plan, also includes the Celtic Sea cod and puts forward ideas for an effort management regime to be applied in that area too.

It should be noted that the Celtic Sea cod stock definition covers ICES Divisions VIIe-k, while the cod in the ICES Divisions VIIb-c is considered to be the West Ireland stock. Landings of cod from the ICES Divisions VIIb-c are very low: 55 tons in 2010 are reported (ICES-WGCSE-2011). However, the overall fishing effort in that area, not dedicated to cod, may be large. This has to be kept in mind while looking at the results for the whole area. Some relevant information on Division VIIe is presented in Section 8 of the report as part of the Annex IIc regulation covering sole. Since cod in Division VIIe is included in the Celtic Sea definition, fishing effort and catches for that area are also considered in this section.

Data available for the Celtic Sea

Catch and effort data have been provided by all Member States excepted Spain.

Spanish data provided the previous years are now under revision, effort and catch time series need to be reconsidered before further complete analysis of the activity in this area.

All analysis was made this year without Spanish data.

The information on discards has improved this year. However, they remain partial and are not provided for the whole country-gear categories and time series. The group decided this year to consider landing per unit of effort and catch per unit of effort. Available data are shown in the section dealing with total landings and discard but it should be kept in mind that these data are not exhaustive.

Métiers in the Celtic Sea

As for the areas covered by Annex IIa, the correspondence between gear-mesh size category and métier in the Celtic Sea may be not straightforward. For instance, the *Nephrops* métier in the Celtic Sea may be part of mesh-size category TR2 for Irish vessels, while for France this métier is contributed to by mesh-size category TR1. Furthermore, even within a same gear and mesh-size category, the impact of fishing on cod may be very different.

A detailed review and explanation of the French métiers practiced in the Celtic Sea was made in the previous report (STECF. 2008. Report of the SGMOS-08-03 Working Group. Fishing effort regime (Sept. 2008)). The exploitation patterns have not changed and were not described in this report. In the context of a cod recovery plan, given that cod is not uniformly abundant all over the Celtic Sea, it could be envisaged that a future effort regime could limit the fishing effort in a zone where the impact on the cod stock will be maximum.

Within the Celtic Sea, the landings of cod predominantly come from Divisions VIIf and VIIg. These areas contribute from 60 to 70% to the total landings of cod from the Celtic Sea (Figures 9.1.1 and 9.1.2). Unfortunately, information on discards is too sparse to be taken into consideration.

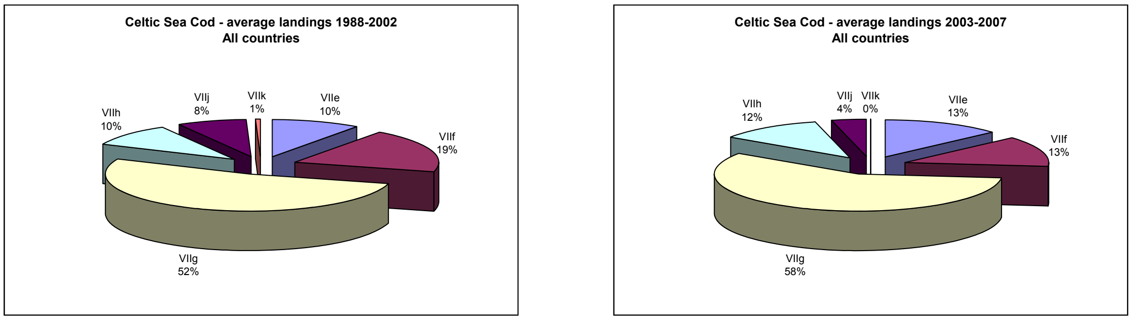


Figure 9.1.1. Contribution of each Division in the landings of cod (data from ICES-WGSSDS08)

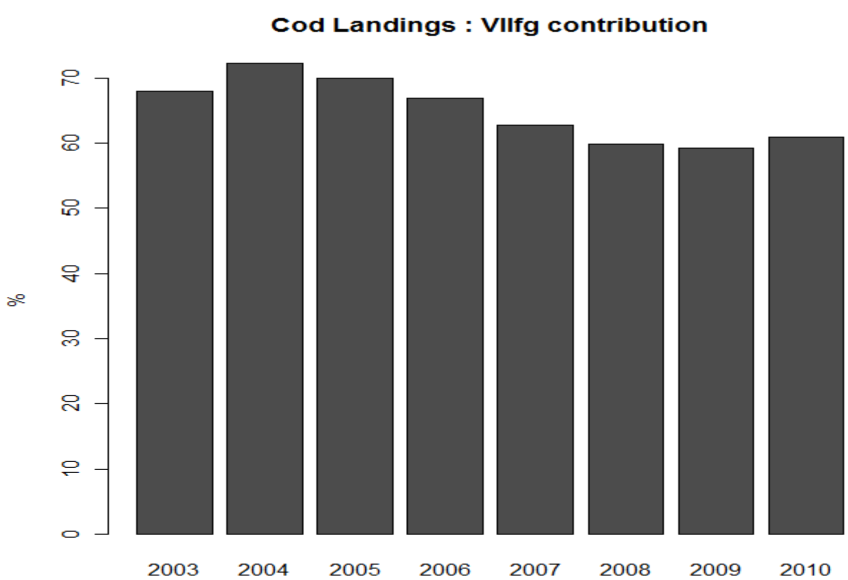


Figure 9.1.2.: Cod: Contribution of the landings from ICES Divisions VIIfg to the total landings from the Celtic Sea (ICES Divisions VIIbc,e-k) over 2003-2010

The average contribution of the Divisions VIIfg to the Celtic Sea landings of cod is about 65%. This contribution has been slightly decreasing in recent years (from 73% in 2004 to 60% between 2008 and 2010); this decrease is probably due to the implementation of the closure of the Trevose box since 2005.

In view of the observation that VIIfg area could be considered as the target area for a cod recovery plan, the European Commission specifically requested that STECF-EWG provide information for this. In each section the VIIfg (also called Cel2 in the text and figures) area is considered in addition to the whole Celtic Sea (VIIbc,e-k also called Cel1) to highlight the contribution of this area to the total effort and to the cod landings, with a presentation of the gear categories and metiers.

9.2. Nominal effort

Relative change to data in 2010:

As a quality check, STECF routinely compares the data currently submitted with the data submitted during the previous year, as is displayed in table 9.2.1. Compared to the data submitted in 2010, Belgium has (sometimes significantly) re-evaluated downwards its figures by correcting for some original duplication of some records. No differences appear between the two data sets for the other countries.

Table 9.2.1 Relative change in nominal effort 2011 data submission compared to 2010 submission (Kw *days at sea) by gear, derogation and country 2000-2009.

ANNEX	REG AREA COD	REG GEAR COD	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cel1	7bcefghjk	BT1	BEL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT1	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT1	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT2	BEL	0	0	0	0	0	0	0	-0,187	0	-0,146
Cel1	7bcefghjk	BT2	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT2	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT2	GBJ	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT2	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT2	NED	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	BT2	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	BEL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	GER	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	NIR	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GN1	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GT1	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GT1	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GT1	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	GT1	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	LL1	DEN	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	LL1	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	LL1	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	LL1	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	LL1	POR	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	LL1	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	BEL	0	0	0	0	0	0	0	0	0	-0,315
Cel1	7bcefghjk	none	DEN	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	GBG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	GBJ	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	GER	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	IOM	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	NED	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	NIR	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	none	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	GBG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	GBJ	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	IOM	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	NED	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	NIR	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR1	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	BEL	0	0	0	0	0	0	0	0	0	-0,136
Cel1	7bcefghjk	TR2	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	GBG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	GBJ	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	NED	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	NIR	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR2	SCO	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR3	DEN	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR3	ENG	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR3	FRA	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR3	IRL	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR3	NED	0	0	0	0	0	0	0	0	0	0
Cel1	7bcefghjk	TR3	SCO	0	0	0	0	0	0	0	0	0	0

Table 9.2.1 continued.

ANNEX	REG AREA COD	REG GEAR COD	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cel2	7fg	BT1	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	BT1	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	BT2	BEL	0	0	0	0	0	0	0	-0,154	0	-0,137
Cel2	7fg	BT2	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	BT2	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	BT2	GBJ	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	BT2	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GN1	BEL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GN1	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GN1	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GN1	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GN1	SCO	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GT1	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GT1	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	GT1	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	LL1	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	LL1	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	LL1	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	LL1	SCO	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	BEL	0	0	0	0	0	0	0	0	0	-0,261
Cel2	7fg	none	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	GBG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	GBJ	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	GER	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	IOM	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	NED	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	none	SCO	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR1	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR1	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR1	IOM	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR1	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR1	NIR	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR1	SCO	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	BEL	0	0	0	0	0	0	0	0	0	-0,124
Cel2	7fg	TR2	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	GBG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	GBJ	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	NIR	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR2	SCO	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR3	ENG	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR3	FRA	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR3	IRL	0	0	0	0	0	0	0	0	0	0
Cel2	7fg	TR3	NED	0	0	0	0	0	0	0	0	0	0

Gear category and Member State

Even though there is at present no effort regulation in the Celtic Sea, the analysis below considered the same gear and mesh categories as used in other areas, as set in the cod recovery plan proposal. Table 9.2.2 lists the trends in effort by gear and mesh categories by country in kW*days. Information on GT*days at sea and the number of vessels active in Celtic sea are not presented in this report but are available on the JRC website:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

Table 9.2.2. Trend in effort (kW*days at sea), according to cod plan gear definition and Member State, 2000-2010. Note, data for Celtic Sea 7bcefghjk (Cel1) are shown first, followed by subset 7fg (Cel2).

Celtic Sea 7bcefghjk (Cel1)

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cel1	7bcefghjk	BT1	none	BEL	O15M									1766		
Cel1	7bcefghjk	BT1	none	ENG	O15M					52079						
Cel1	7bcefghjk	BT1	none	IRL	O15M				14428							
Cel1	7bcefghjk	BT2	none	BEL	O15M	2033531	2038479	2286465	2914644	4568918	3996701	3246205	3351614	2285026	1932211	2392748
Cel1	7bcefghjk	BT2	none	ENG	O10T15M	56879	169147	144721	168607	72927	57373	53413	68457	68770	39504	57209
Cel1	7bcefghjk	BT2	none	ENG	O15M	5408034	5570946	5247778	5871505	5623896	5626763	5225546	4943815	4253780	3822565	3678346
Cel1	7bcefghjk	BT2	none	FRA	O10T15M	19608	15582	14707	7217	27252	19355	99790	130720	55970	48196	109999
Cel1	7bcefghjk	BT2	none	FRA	O15M		85561	181057	37869	290521	244545	206042	189856	90473	90473	196958
Cel1	7bcefghjk	BT2	none	GBJ	O15M	173431	277324	278577	284450	365302	202229					
Cel1	7bcefghjk	BT2	none	IRL	O10T15M								187			
Cel1	7bcefghjk	BT2	none	IRL	O15M				3628194	2280127	2942708	2073221	1765762	1020052	915583	1012352
Cel1	7bcefghjk	BT2	none	NED	O15M	26478			22000							1467
Cel1	7bcefghjk	BT2	none	SCO	O15M								3666		1396	
Cel1	7bcefghjk	GN1	none	BEL	O15M									2700		
Cel1	7bcefghjk	GN1	none	ENG	O10T15M	286060	342957	344063	368630	408264	321651	303347	273695	241386	271875	263560
Cel1	7bcefghjk	GN1	none	ENG	O15M	1487816	1190148	1402935	1703645	1801520	1361727	664922	710075	482738	364708	458224
Cel1	7bcefghjk	GN1	none	FRA	O10T15M	275261	273569	2213729	740936	1015940	904288	951675	917344	704412	704349	442616
Cel1	7bcefghjk	GN1	none	FRA	O15M	807869	896164	2198446	1042726	1069302	1240069	996131	1258557	1535687	1535360	1791358
Cel1	7bcefghjk	GN1	none	GBJ	o15m											716
Cel1	7bcefghjk	GN1	none	GER	O15M	417051	391578	377303	371138	452381	396914	32794	171880	229650	93910	114413
Cel1	7bcefghjk	GN1	none	IRL	O10T15M	73490	48050	33867	57332	66686	61406	75472	84989	104765	122164	194641
Cel1	7bcefghjk	GN1	none	IRL	O15M	1544573	1282377	743429	947464	780583	602168	450629	462470	428097	415466	446173
Cel1	7bcefghjk	GN1	none	NIR	O10T15M										2106	1701
Cel1	7bcefghjk	GN1	none	SCO	O15M	450872	348860	250000	467260	643185	498868	192066	193116	355646	437451	387259
Cel1	7bcefghjk	GT1	none	ENG	O10T15M	7301	1819		373	243	11051	7204	13030	17085	14082	2188
Cel1	7bcefghjk	GT1	none	ENG	O15M	1709	3120	936	17903	40645	16189	63807	16867	20745	3249	13969
Cel1	7bcefghjk	GT1	none	FRA	O10T15M	362480	428847	1376153	463009	613504	763828	906651	1057950	662533	662382	493742
Cel1	7bcefghjk	GT1	none	FRA	O15M	140184	216520	1121650	299226	358319	438016	465337	471663	381102	381102	498932
Cel1	7bcefghjk	GT1	none	IRL	O10T15M				802			4737	5471	9180	14663	42065
Cel1	7bcefghjk	GT1	none	IRL	O15M		3885			172	16260	13550	18504	34885	22540	38938
Cel1	7bcefghjk	GT1	none	SCO	O15M	74562	102966	112004	50501	13362						
Cel1	7bcefghjk	LL1	none	DEN	O15M			6993								
Cel1	7bcefghjk	LL1	none	ENG	O10T15M	138391	108211	74205	82631	64003	57687	69608	81526	63299	42273	50388
Cel1	7bcefghjk	LL1	none	ENG	O15M	354301	326937	417981	318021	276751	265897	405536	575325	138810	4194	6800
Cel1	7bcefghjk	LL1	none	FRA	O10T15M	41782	25673	327200	111426	153667	198527	350334	313997	139114	139114	170925
Cel1	7bcefghjk	LL1	none	FRA	O15M	127040	84155	177620	123656	184636	206807	360284	410608	336703	336703	382978
Cel1	7bcefghjk	LL1	none	IRL	O10T15M						4074	605	8642	15225	23396	54236
Cel1	7bcefghjk	LL1	none	IRL	O15M	77156	133688	69300	83386	3600	68722	660	18092	8381	3956	17819
Cel1	7bcefghjk	LL1	none	POR	O15M				3302							
Cel1	7bcefghjk	LL1	none	SCO	O10T15M						221					
Cel1	7bcefghjk	LL1	none	SCO	O15M	196263	298487	286098	136014	6160	50975	249936	257928	811319	194403	261208
Cel1	7bcefghjk	none	none	BEL	O15M	39400	41286	36086	21681					23028	111781	138679
Cel1	7bcefghjk	none	none	DEN	O15M	660889	513780	413879	293640	547907	594336	553811	967873	442695	770560	2234854
Cel1	7bcefghjk	none	none	ENG	O10T15M	1209544	1179618	1105939	1158611	1258193	1550747	1339494	1369088	1186674	1423892	1443016
Cel1	7bcefghjk	none	none	ENG	O15M	2215999	2338181	2540437	2171792	2206588	2089660	2402831	2390669	2386345	2479504	3084523
Cel1	7bcefghjk	none	none	FRA	O10T15M	1416926	1830934	12787875	3691906	5110484	5065828	5782705	5494277	3094070	3054033	2894664
Cel1	7bcefghjk	none	none	FRA	O15M	1887941	2533148	9586712	2721879	2987318	2776045	2885816	3177711	1955612	1952278	3280352
Cel1	7bcefghjk	none	none	GBG	O10T15M	67655	51787	8646					201	112	191	6632
Cel1	7bcefghjk	none	none	GBG	O15M	43977	83277	2686		75868	56398	39402	67026	36910	53973	53544
Cel1	7bcefghjk	none	none	GBJ	O15M	127744	146052	86529	55311	5248		19963		34730	11426	440
Cel1	7bcefghjk	none	none	GER	O15M	1189505	1029246	1217137	1243212	1259778	1003897	894497	1012370	1225530	1141045	1905440
Cel1	7bcefghjk	none	none	IOM	O10T15M									1689		
Cel1	7bcefghjk	none	none	IOM	O15M	13000	21775	19240				23622	1488		9840	
Cel1	7bcefghjk	none	none	IRL	none											
Cel1	7bcefghjk	none	none	IRL	O10T15M	284383	343625	362743	99373	154831	131209	157801	351318	299998	282981	679800
Cel1	7bcefghjk	none	none	IRL	O15M	12802515	13331397	14962724	2767822	4895742	2406731	1520688	2320118	2356107	3449195	4430847
Cel1	7bcefghjk	none	none	LIT	O40M										246000	
Cel1	7bcefghjk	none	none	NED	O15M	7363782	6362540	5262640	5452874	5348836	4925416	4813371	4426746	6055935	4842897	6053599
Cel1	7bcefghjk	none	none	NIR	o10t15m											7833
Cel1	7bcefghjk	none	none	NIR	O15M	113924	71714	146089	162183	169317	176240	25667	51430	14170	34520	15640
Cel1	7bcefghjk	none	none	SCO	O10T15M		425	728	3427	5066	23126	596			5364	7722
Cel1	7bcefghjk	none	none	SCO	O15M	1455102	1797258	1577459	1144864	1804690	2246318	1052240	1459490	1646135	1446835	2084650

Table 9.2.2. continued.

Celtic Sea 7bcefghjk (Cel1)

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cel1	7bcefghjk	TR1	none	ENG	O10T15M	17059	54662	65325	51486	24379	12250	18271	30261	68970	105201	173102
Cel1	7bcefghjk	TR1	none	ENG	O15M	389534	1460877	3406325	2383920	2237575	1791918	2209095	2274588	1591367	1245550	1368151
Cel1	7bcefghjk	TR1	none	FRA	O10T15M		3266	87847	18668	21245	24258	28074	19271	2627	2627	6974
Cel1	7bcefghjk	TR1	none	FRA	O15M	4745042	6521242	31670939	7715939	7767596	7342415	7853011	7400986	6311661	6287869	9424263
Cel1	7bcefghjk	TR1	none	GBG	O10T15M								328	402		
Cel1	7bcefghjk	TR1	none	GBG	O15M			5811								
Cel1	7bcefghjk	TR1	none	GBJ	O15M		6396	2296								
Cel1	7bcefghjk	TR1	none	IOM	O15M	11967										
Cel1	7bcefghjk	TR1	none	IRL	O10T15M				402		4595	32698	12161	18276	26142	92948
Cel1	7bcefghjk	TR1	none	IRL	O15M				5555942	4764153	4587954	3769997	3947570	3774294	3996363	4728514
Cel1	7bcefghjk	TR1	none	NED	O15M		735									6044
Cel1	7bcefghjk	TR1	none	NIR	O15M	7897	20675	12016	7641		716	5176		1141	1805	16616
Cel1	7bcefghjk	TR1	none	SCO	O10T15M				600						36953	58669
Cel1	7bcefghjk	TR1	none	SCO	O15M	162262	347400	792686	802171	879428	1084677	779453	681392	835556	869444	939069
Cel1	7bcefghjk	TR2	none	BEL	O15M					119327	188914	424630	464699	467476	468989	425076
Cel1	7bcefghjk	TR2	none	ENG	O10T15M	1603997	1451287	1314991	1399554	1465978	1433817	1480821	1518102	1475791	1506282	1407067
Cel1	7bcefghjk	TR2	none	ENG	O15M	5787558	3624454	825033	778265	793106	748269	545935	546165	188851	211851	270932
Cel1	7bcefghjk	TR2	none	FRA	O10T15M	447838	457383	2723095	990647	1170583	934323	1811990	2322695	1359817	1332591	1377589
Cel1	7bcefghjk	TR2	none	FRA	O15M	6510657	8307813	41088422	9525729	9749701	10606401	9086047	8463099	5978693	5961053	5517774
Cel1	7bcefghjk	TR2	none	GBG	O10T15M						730	6042	11065	5203	3090	7854
Cel1	7bcefghjk	TR2	none	GBG	O15M	15106	42207	27222				336				
Cel1	7bcefghjk	TR2	none	GBJ	O15M	69291	32364	36663	3557		6745	19360	30580	25740	31020	37620
Cel1	7bcefghjk	TR2	none	IRL	none											
Cel1	7bcefghjk	TR2	none	IRL	O10T15M				289191	239187	335322	325095	434967	427596	531072	782575
Cel1	7bcefghjk	TR2	none	IRL	O15M				4786076	4839643	6129868	5369633	5563245	4135139	2986641	3994623
Cel1	7bcefghjk	TR2	none	NED	O15M	2847	36507	36223	36589	64393	108566	162551	113851	90839	216240	252472
Cel1	7bcefghjk	TR2	none	NIR	O10T15M										1832	1832
Cel1	7bcefghjk	TR2	none	NIR	O15M	28717	2620	2184		53672	72432	42938	20658	131938	142224	144625
Cel1	7bcefghjk	TR2	none	SCO	O10T15M				37584	76992	66156	5364	17582	162	9536	17322
Cel1	7bcefghjk	TR2	none	SCO	O15M	1402569	945649	413810	451909	367030	352869	382627	350470	506435	485883	439290
Cel1	7bcefghjk	TR3	none	DEN	O15M	11867		36892		15575						
Cel1	7bcefghjk	TR3	none	ENG	O10T15M	3019	1660	93	1157	559	220	1505	4986	7072	10318	2204
Cel1	7bcefghjk	TR3	none	ENG	O15M	648	216	108	5112	432	2984		660	880		
Cel1	7bcefghjk	TR3	none	FRA	O10T15M		3432	9073	5832	5840	14923	17955	2179	7931	7931	22410
Cel1	7bcefghjk	TR3	none	FRA	O15M	55719	38826			1146		3516	2304	1596	1596	32619
Cel1	7bcefghjk	TR3	none	IRL	O10T15M								403	906	4665	2178
Cel1	7bcefghjk	TR3	none	IRL	O15M				8499	8964	340	10012	3573	11035	12724	10585
Cel1	7bcefghjk	TR3	none	NED	O15M	28392	5096									
Cel1	7bcefghjk	TR3	none	SCO	O10T15M					1192	4917				894	
Cel1	7bcefghjk	TR3	none	SCO	O15M									5499		

Table 9.2.2 continued subset 7fg (Cel2)

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cel2	7fg	BT1	none	ENG	O15M					8787						
Cel2	7fg	BT1	none	IRL	O15M				10273							
Cel2	7fg	BT2	none	BEL	O15M	2010209	1973485	2033727	2419519	3744619	3121706	2534199	2448583	1651116	1570823	1987520
Cel2	7fg	BT2	none	ENG	O10T15M	13039	54781	43428	60008	42075	9779		676	7691	7891	11403
Cel2	7fg	BT2	none	ENG	O15M	1370570	1416562	884031	990442	970762	775553	645496	569682	403865	408146	392279
Cel2	7fg	BT2	none	FRA	O10T15M						2200					1665
Cel2	7fg	BT2	none	FRA	O15M							15965				486
Cel2	7fg	BT2	none	GBJ	O15M	73487	86592	97414	151639	145409	46378					
Cel2	7fg	BT2	none	IRL	O10T15M								187			
Cel2	7fg	BT2	none	IRL	O15M				2757116	1743796	2371182	1773463	1542819	960802	839365	974475
Cel2	7fg	GN1	none	BEL	O15M									1800		
Cel2	7fg	GN1	none	ENG	O10T15M	51225	89853	93277	116140	166518	116219	127376	112183	85832	88748	101641
Cel2	7fg	GN1	none	ENG	O15M	358551	223562	406656	310997	347111	323813	278118	265198	223518	171258	184084
Cel2	7fg	GN1	none	FRA	O15M	97635	66740	79912	29862	37833	18804		5908	441	441	4199
Cel2	7fg	GN1	none	GBJ	o15m											716
Cel2	7fg	GN1	none	IRL	O10T15M	59427	34141	30370	32348	49730	44009	52760	42748	55606	71817	107483
Cel2	7fg	GN1	none	IRL	O15M	148671	217754	123324	277775	353265	265209	131942	187729	246401	162514	182176
Cel2	7fg	GN1	none	SCO	O15M				689	721	1337					
Cel2	7fg	GT1	none	ENG	O10T15M	55	428		373	243	4630	5447	5497	4186	9217	1538
Cel2	7fg	GT1	none	ENG	O15M		1664	936	1197	23676	4647	21344	12802	12273	2052	5572
Cel2	7fg	GT1	none	FRA	O10T15M					1458		7683				11645
Cel2	7fg	GT1	none	FRA	O15M			8064	8456	801	14256	20068	21032	19104	19104	7506
Cel2	7fg	GT1	none	IRL	O10T15M				802				3135	3620	6741	13269
Cel2	7fg	GT1	none	IRL	O15M								6508	8749	1544	16166
Cel2	7fg	LL1	none	ENG	O10T15M	38531	23718	9636	15155	3743	1093	703	2622	498	4673	3785
Cel2	7fg	LL1	none	ENG	O15M	42597	57931	45243	12907	29331	43411	32066	11479	5879	215	828
Cel2	7fg	LL1	none	FRA	O15M			4500			4745		552	883	883	
Cel2	7fg	LL1	none	IRL	O10T15M								3583	4986	3723	4517
Cel2	7fg	LL1	none	IRL	O15M		1432				2167					2240
Cel2	7fg	LL1	none	SCO	O10T15M						221					
Cel2	7fg	LL1	none	SCO	O15M		886									
Cel2	7fg	none	none	BEL	O15M	39210	41286	35195	21681					10708	11138	15555
Cel2	7fg	none	none	DEN	o15m											32320
Cel2	7fg	none	none	ENG	O10T15M	214912	275417	331573	424122	408788	496899	324344	404951	414939	451365	499587
Cel2	7fg	none	none	ENG	O15M	127943	133481	55462	46127	109952	116181	90449	133746	167217	178813	228367
Cel2	7fg	none	none	FRA	o10t15m											2481
Cel2	7fg	none	none	FRA	O15M	115827	96795	326385	43037	40436	36015	61169	40847	23492	23492	69141
Cel2	7fg	none	none	GBG	O15M	1846	26319						20910	16433	20888	
Cel2	7fg	none	none	GBJ	O15M	9876	26568	19068	984	3772				34730	11426	
Cel2	7fg	none	none	GER	O15M										5299	8589
Cel2	7fg	none	none	IOM	O10T15M									911		
Cel2	7fg	none	none	IOM	O15M		637	2262				3720	372		9840	
Cel2	7fg	none	none	IRL	none											
Cel2	7fg	none	none	IRL	O10T15M	106755	137414	127792	23162	12175	10353	14062	28462	37409	25238	75485
Cel2	7fg	none	none	IRL	O15M	5266943	5539182	5565895	856504	1453212	304598	188258	264787	242276	364782	532015
Cel2	7fg	none	none	NED	O15M	13194	7040	17237	173084	115456	7210	47870	50829	4725	1628	3960
Cel2	7fg	none	none	NIR	o10t15m											7833
Cel2	7fg	none	none	SCO	O10T15M		425								4470	6732
Cel2	7fg	none	none	SCO	O15M	18071	7323	3196		2000	16246	39971	13036	21843	56979	94962

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cel2	7fg	TR1	none	ENG	O10T15M	6196	40056	51698	23520	4919	3621	7115	3761	4872	7425	15376
Cel2	7fg	TR1	none	ENG	O15M	18435	90107	112701	88239	117608	76471	79283	70737	96274	107621	147472
Cel2	7fg	TR1	none	FRA	o10t15m											330
Cel2	7fg	TR1	none	FRA	O15M	2614199	3456521	17034562	3460445	3326622	3113639	2740592	2475013	2303217	2295080	3282997
Cel2	7fg	TR1	none	IOM	O15M	11967										
Cel2	7fg	TR1	none	IRL	O10T15M				402		1455	29926	11211	16349	13532	24811
Cel2	7fg	TR1	none	IRL	O15M				660312	676466	848385	1017017	1374554	1617605	1898900	2033567
Cel2	7fg	TR1	none	NIR	O15M	7897	20675	12016	7641		716	5176		1141	1805	16028
Cel2	7fg	TR1	none	SCO	O10T15M										745	894
Cel2	7fg	TR1	none	SCO	O15M	979	11316	5266	9622	7701		9616	4479	12835	12332	86805
Cel2	7fg	TR2	none	BEL	O15M					110564	168754	400049	443057	434936	449108	379027
Cel2	7fg	TR2	none	ENG	O10T15M	187887	178191	169348	181115	154707	165360	257877	176637	225580	184298	192609
Cel2	7fg	TR2	none	ENG	O15M	211818	146042	75092	96138	80260	86357	50874	55815	33883	40429	79839
Cel2	7fg	TR2	none	FRA	O10T15M									3250	3250	1302
Cel2	7fg	TR2	none	FRA	O15M	1016773	1117706	2777768	711296	593609	731407	287766	355358	227706	227706	72113
Cel2	7fg	TR2	none	GBG	O15M			421								
Cel2	7fg	TR2	none	GBJ	O15M	742										
Cel2	7fg	TR2	none	IRL	O10T15M				133077	116163	152544	196727	229432	203843	197525	294137
Cel2	7fg	TR2	none	IRL	O15M				2072329	2103502	3143480	2601602	2610042	2076419	1661508	2062635
Cel2	7fg	TR2	none	NIR	O10T15M										1832	1832
Cel2	7fg	TR2	none	NIR	O15M	28717	2620	2184		52370	72432	42938	20658	127726	141738	144049
Cel2	7fg	TR2	none	SCO	O10T15M									162		
Cel2	7fg	TR2	none	SCO	O15M	4865			4770	12285	4095	2828		2531	29426	3626
Cel2	7fg	TR3	none	ENG	O10T15M		358			373						
Cel2	7fg	TR3	none	ENG	O15M						1119					
Cel2	7fg	TR3	none	FRA	o10t15m											212
Cel2	7fg	TR3	none	FRA	O15M	23695	4770									
Cel2	7fg	TR3	none	IRL	O10T15M									324		
Cel2	7fg	TR3	none	IRL	O15M							720			1500	
Cel2	7fg	TR3	none	NED	O15M	4368										

Celtic Sea all

Effort contributions by vessels from different nations are shown in (Figure 9.2.1). In terms of kW*days, France contributes 38 %, UK 20% Ireland 21%, the Netherlands 7%, Scotland 5% and Belgium 4% (average 2003-2010).

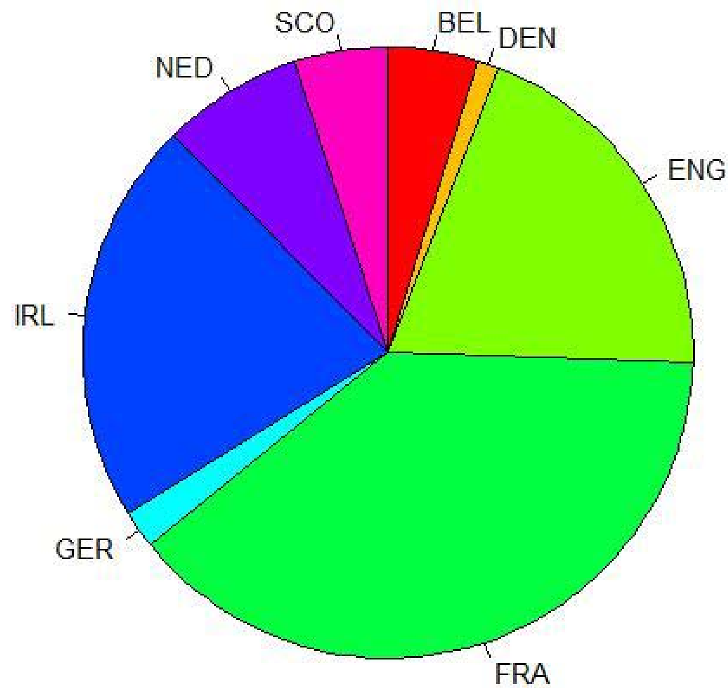


Figure 9.2.1. Contribution of each country (Countries fishing less fishing less than 1% of the total catches were excluded from the figure) to the total effort in the Celtic Sea (mean 2003-2010). Spanish effort is missing.

Effort in the overall Celtic Sea, combined across countries and summarized by regulated gears (as designated in those areas covered by the existing Annex IIa4 is shown in Table 9.2.4.

Table 9.2.4 Trend in effort (kW*days at sea), according to cod plan gear definition in the Celtic Sea (Cel 1 7bcefghjk), 2004-2010.

COUNTRY	REG GEAR COD	2004	2005	2006	2007	2008	2009	2010	RelChange2004	RelChange2009
BEL	BT1	0	0	0	0	1766	0	0	NaN	NaN
BEL	BT2	4568918	3996701	3246205	3351614	2285026	1932211	2392748	-48%	24%
BEL	GN1	0	0	0	0	2700	0	0	NaN	NaN
BEL	none	0	0	0	0	23028	111781	138679	NaN	24%
BEL	TR2	119327	188914	424630	464699	467476	468989	425076	256%	-9%
DEN	LL1	0	0	0	0	0	0	0	NaN	NaN
DEN	none	547907	594336	553811	967873	442695	770560	2234854	308%	190%
DEN	TR3	15575	0	0	0	0	0	0	-100%	NaN
ENG	BT1	52079	0	0	0	0	0	0	-100%	NaN
ENG	BT2	5696823	5684136	5278959	5012272	4322550	3862069	3735555	-34%	-3%
ENG	GN1	2209784	1683378	968269	983770	724124	636583	721784	-67%	13%
ENG	GT1	40888	27240	71011	29897	37830	17331	16157	-60%	-7%
ENG	LL1	340754	323584	475144	656851	202109	46467	57188	-83%	23%
ENG	none	3464781	3640407	3742325	3759757	3573019	3903396	4527539	31%	16%
ENG	TR1	2261954	1804168	2227366	2304849	1660337	1350751	1541253	-32%	14%
ENG	TR2	2259084	2182086	2026756	2064267	1664642	1718133	1677999	-26%	-2%
ENG	TR3	991	3204	1505	5646	7952	10318	2204	122%	-79%
FRA	BT2	317773	263900	305832	320576	146443	138669	306957	-3%	121%
FRA	GN1	2085242	2144357	1947806	2175901	2240099	2239709	2233974	7%	0%
FRA	GT1	971823	1201844	1371988	1529613	1043635	1043484	992674	2%	-5%
FRA	LL1	338303	405334	710618	724605	475817	475817	553903	64%	16%
FRA	none	8097802	7841873	8668521	8671988	5049682	5006311	6175016	-24%	23%
FRA	TR1	7788841	7366673	7881085	7420257	6314288	6290496	9431237	21%	50%
FRA	TR2	10920284	11540724	10898037	10785794	7338510	7293644	6895363	-37%	-5%
FRA	TR3	6986	14923	21471	4483	9527	9527	55029	688%	478%
GBG	none	75868	56398	39402	67227	37022	54164	60176	-21%	11%
GBG	TR1	0	0	0	328	402	0	0	NaN	NaN
GBG	TR2	0	730	6378	11065	5203	3090	7854	NaN	154%
GBJ	BT2	365302	202229	0	0	0	0	0	-100%	NaN
GBJ	GN1	0	0	0	0	0	0	716	NaN	NaN
GBJ	none	5248	0	19963	0	34730	11426	440	-92%	-96%
GBJ	TR1	0	0	0	0	0	0	0	NaN	NaN
GBJ	TR2	0	6745	19360	30580	25740	31020	37620	NaN	21%
GER	GN1	452381	396914	32794	171880	229650	93910	114413	-75%	22%
GER	none	1259778	1003897	894497	1012370	1225530	1141045	1905440	51%	67%
IOM	none	0	0	23622	1488	1689	9840	0	NaN	-100%
IOM	TR1	0	0	0	0	0	0	0	NaN	NaN
IRL	BT1	0	0	0	0	0	0	0	NaN	NaN
IRL	BT2	2280127	2942708	2073221	1765949	1020052	915583	1012352	-56%	11%
IRL	GN1	847269	663574	526101	547459	532862	537630	640814	-24%	19%
IRL	GT1	172	16260	18287	23975	44065	37203	81003	46995%	118%
IRL	LL1	3600	72796	1265	26734	23606	27352	72055	1902%	163%
IRL	none	5050573	2537940	1678489	2671436	2656105	3732176	5110647	1%	37%
IRL	TR1	4764153	4592549	3802695	3959731	3792570	4022505	4821462	1%	20%
IRL	TR2	5078830	6465190	5694728	5998212	4562735	3517713	4777198	-6%	36%
IRL	TR3	8964	340	10012	3976	11941	17389	12763	42%	-27%
LIT	none	0	0	0	0	0	246000	0	NaN	-100%
NED	BT2	0	0	0	0	0	0	1467	NaN	NaN
NED	none	5348836	4925416	4813371	4426746	6055935	4842897	6053599	13%	25%
NED	TR1	0	0	0	0	0	0	6044	NaN	NaN
NED	TR2	64393	108566	162551	113851	90839	216240	252472	292%	17%
NED	TR3	0	0	0	0	0	0	0	NaN	NaN
NIR	GN1	0	0	0	0	0	2106	1701	NaN	-19%
NIR	none	169317	176240	25667	51430	14170	34520	23473	-86%	-32%
NIR	TR1	0	716	5176	0	1141	1805	16616	NaN	821%
NIR	TR2	53672	72432	42938	20658	131938	144056	146457	173%	2%
POR	LL1	0	0	0	0	0	0	0	NaN	NaN
SCO	BT2	0	0	0	3666	0	1396	0	NaN	-100%
SCO	GN1	643185	498868	192066	193116	355646	437451	387259	-40%	-11%
SCO	GT1	13362	0	0	0	0	0	0	-100%	NaN
SCO	LL1	6160	51196	249936	257928	811319	194403	261208	4140%	34%
SCO	none	1809756	2269444	1052836	1459490	1646135	1452199	2092372	16%	44%
SCO	TR1	879428	1084677	779453	681392	835556	906397	997738	13%	10%
SCO	TR2	444022	419025	387991	368052	506597	495419	456612	3%	-8%
SCO	TR3	1192	4917	0	0	5499	894	0	-100%	-100%

The mean proportion of total effort over the years 2003-2010 (in order to exclude years with no Irish disaggregated data) of each gear category (Figure 9.2.2) shows that “none” represent a third of the effort in this area and the other two main categories are TR1 and TR2. BT2 contribute to 14% on average to the reported fishing effort in 2003-2010.

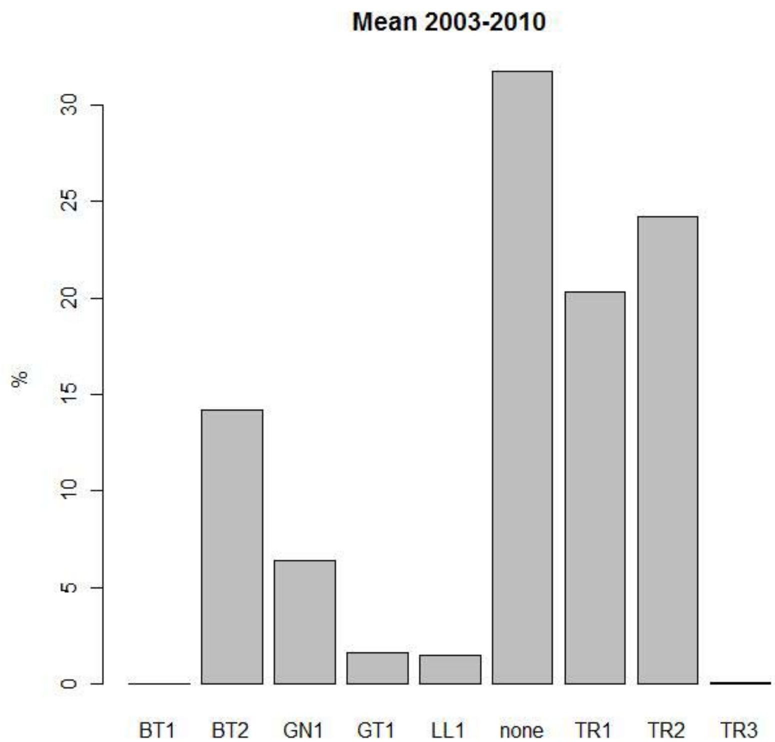


Figure 9.2.2. Contribution of each gear category to the total effort (kWdays) in the Celtic Sea (ICES Divisions VIIbc,e-k). Mean over 2003-2010. Spanish effort is missing.

The ‘none’ category means either that no information is available to allocate the effort data to a regulated gear in a mesh-size category or that there is no proposal to regulate that category of gear. This category accounts for around 39% in 2000-2002, when disaggregated Irish data are not available; this proportion fell to 30% since then and is stable in percentage over the area since then. The recent increase of the ‘none’ is mainly due to the development of the Danish and Ireland boarfish fisheries (pelagic boats fishing for boarfish in the Celtic sea)

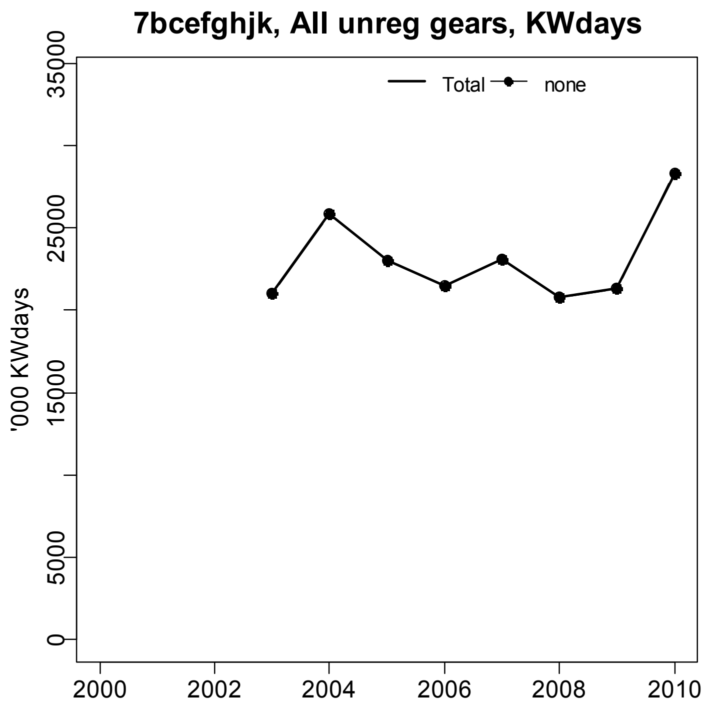


Fig. 9.2.3. Trend in nominal effort for gear-category 'none' in the Celtic Sea, 2003-2010.

Figures 9.2.4 to 9.2.9 show the recent trends in nominal effort for the various gear categories and mesh size in the Celtic Sea. Tables 9.2.1 to 9.2.3 provide details.

Total effort (Spanish data not available) has been decreasing since the start of the series. Most of the decrease in effort occurred in 2008 and 2009 but the effort increased in 2010. The decrease in 2008 was mainly due to the decrease of the French TR2 that was the main gear category in this area. In 2010, most of the gear category stabilized at 2009 level or slightly increased. The gear category TR1 increased in 2010 and is mostly responsible of the increase of the total effort level. The gear category TR1 is now the main category in the area Cel1.

Figures 9.2.5, 9.2.6 and 9.2.7 show the fishing effort for the whole gear categories.

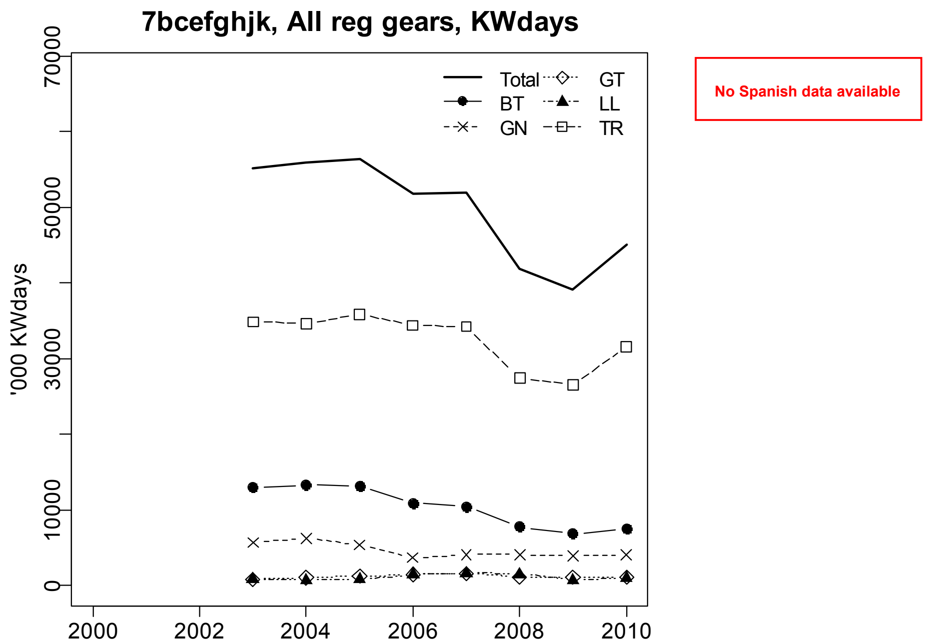


Fig. 9.2.4. Trend in nominal effort by gear types in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2010.

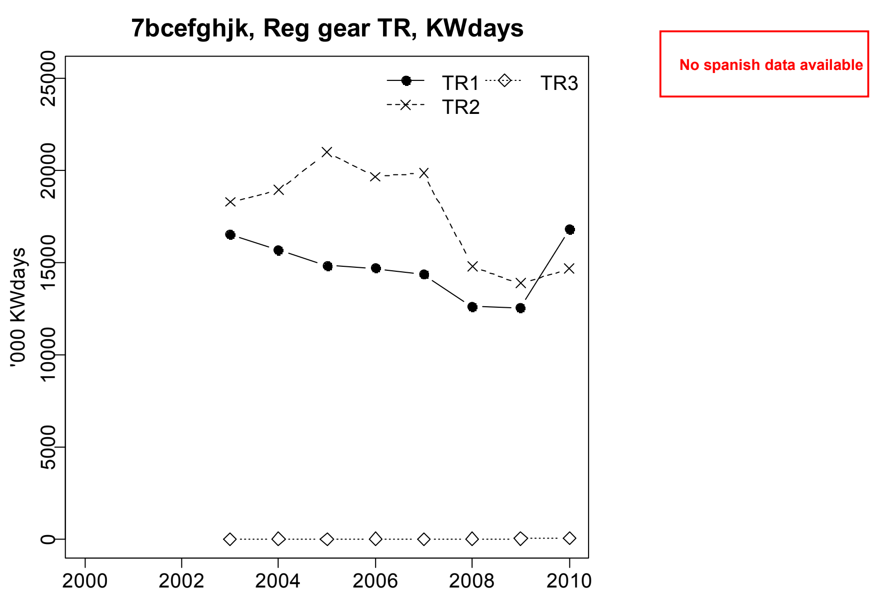


Fig. 9.2.5. Trend in nominal effort for demersal trawl (Regulated Gear TR1, TR2 and TR3) in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2010.

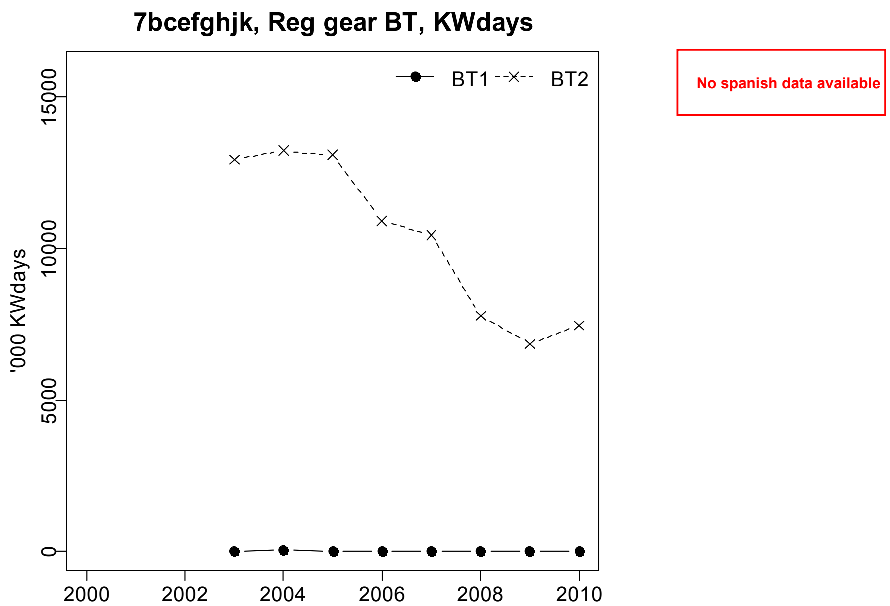


Fig. 9.2.6. Trend in nominal effort for beam trawl by mesh size range (Regulated Gear BT1, BT2) in the Celtic Sea (ICES Divisions VIIbc,e-k), 2000-2010.

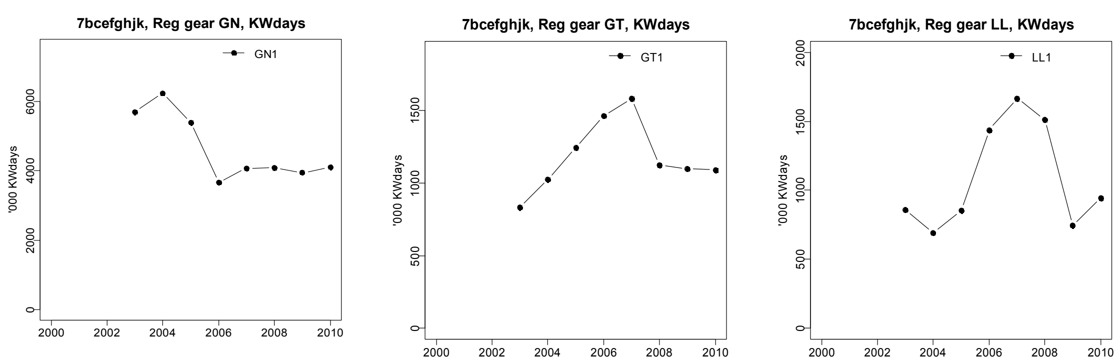


Fig. 9.2.7. Trend in nominal effort for Regulated Gear GT, GN1, LL1) in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2010.

VIIfg – part of Celtic Sea

Contributions by different countries to overall effort in the smaller area, VIIfg are shown in (Figure 9.2.8). Vessels from Belgium, France, Ireland and UK(E-W) operate in the Divisions VIIfg. In terms of kW*days, Ireland contributes to 43%, France 23%, UK 14% and Belgium 19% (average 2003-2010).

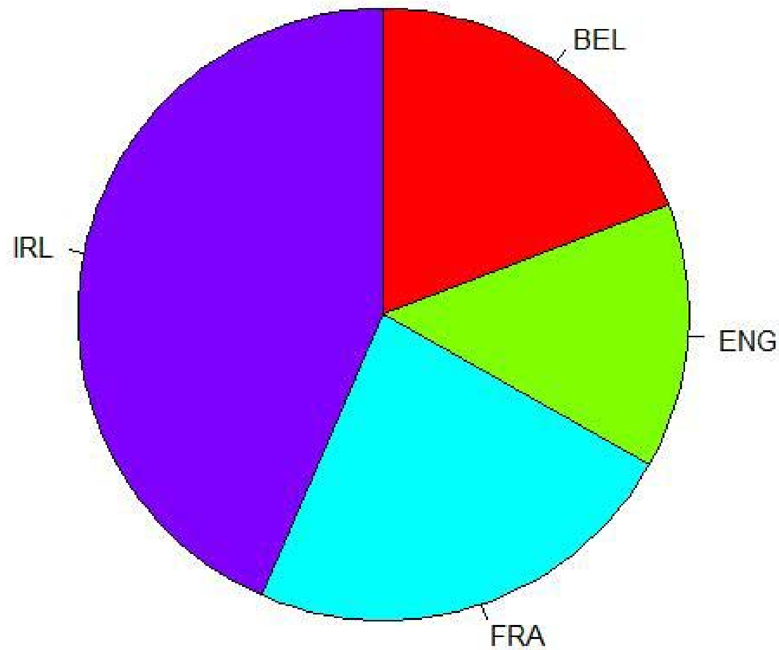


Figure 9.2.8. Contribution of each country (Countries fishing less fishing less than 1% of the total catches were excluded from the figure) to the total effort in the Divisions VIIfg (mean 2003-2010).

Effort combined across countries and summarized for different gear categories for the area Cel2 are given in Tables 9.2.5.

Table 9.2.5 Trend in effort (kW*days at sea) Gear group and special condition (SPECON) in the ICES Divisions VIIfg, 2000-2010.

COUNTR	REG GEAR COD	2004	2005	2006	2007	2008	2009	2010	RelChange2004	RelChange2009
BEL	BT2	3744619	3121706	2534199	2448583	1651116	1570823	1987520	-47%	27%
BEL	GN1	0	0	0	0	1800	0	0	NaN	NaN
BEL	none	0	0	0	0	10708	11138	15555	NaN	40%
BEL	TR2	110564	168754	400049	443057	434936	449108	379027	243%	-16%
DEN	none	0	0	0	0	0	0	32320	NaN	NaN
ENG	BT1	8787	0	0	0	0	0	0	-100%	NaN
ENG	BT2	1012837	785332	645496	570358	411556	416037	403682	-60%	-3%
ENG	GN1	513629	440032	405494	377381	309350	260006	285725	-44%	10%
ENG	GT1	23919	9277	26791	18299	16459	11269	7110	-70%	-37%
ENG	LL1	33074	44504	32769	14101	6377	4888	4613	-86%	-6%
ENG	none	518740	613080	414793	538697	582156	630178	727954	40%	16%
ENG	TR1	122527	80092	86398	74498	101146	115046	162848	33%	42%
ENG	TR2	234967	251717	308751	232452	259463	224727	272448	16%	21%
ENG	TR3	373	1119	0	0	0	0	0	-100%	NaN
FRA	BT2	0	2200	15965	0	0	0	2151	NaN	NaN
FRA	GN1	37833	18804	0	5908	441	441	4199	-89%	852%
FRA	GT1	2259	14256	27751	21032	19104	19104	19151	748%	0%
FRA	LL1	0	4745	0	552	883	883	0	NaN	-100%
FRA	none	40436	36015	61169	40847	23492	23492	71622	77%	205%
FRA	TR1	3326622	3113639	2740592	2475013	2303217	2295080	3283327	-1%	43%
FRA	TR2	593609	731407	287766	355358	230956	230956	73415	-88%	-68%
FRA	TR3	0	0	0	0	0	0	212	NaN	NaN
GBG	none	0	0	0	20910	16433	20888	0	NaN	-100%
GBG	TR2	0	0	0	0	0	0	0	NaN	NaN
GBJ	BT2	145409	46378	0	0	0	0	0	-100%	NaN
GBJ	GN1	0	0	0	0	0	0	716	NaN	NaN
GBJ	none	3772	0	0	0	34730	11426	0	-100%	-100%
GBJ	TR2	0	0	0	0	0	0	0	NaN	NaN
GER	none	0	0	0	0	0	5299	8589	NaN	62%
IOM	none	0	0	3720	372	911	9840	0	NaN	-100%
IOM	TR1	0	0	0	0	0	0	0	NaN	NaN
IRL	BT1	0	0	0	0	0	0	0	NaN	NaN
IRL	BT2	1743796	2371182	1773463	1543006	960802	839365	974475	-44%	16%
IRL	GN1	402995	309218	184702	230477	302007	234331	289659	-28%	24%
IRL	GT1	0	0	0	9643	12369	8285	29435	NaN	255%
IRL	LL1	0	2167	0	3583	4986	3723	6757	NaN	81%
IRL	none	1465387	314951	202320	293249	279685	390020	607500	-59%	56%
IRL	TR1	676466	849840	1046943	1385765	1633954	1912432	2058378	204%	8%
IRL	TR2	2219665	3296024	2798329	2839474	2280262	1859033	2356772	6%	27%
IRL	TR3	0	0	720	0	324	1500	0	NaN	-100%
NED	none	115456	7210	47870	50829	4725	1628	3960	-97%	143%
NED	TR3	0	0	0	0	0	0	0	NaN	NaN
NIR	none	0	0	0	0	0	0	7833	NaN	NaN
NIR	TR1	0	716	5176	0	1141	1805	16028	NaN	788%
NIR	TR2	52370	72432	42938	20658	127726	143570	145881	179%	2%
SCO	GN1	721	1337	0	0	0	0	0	-100%	NaN
SCO	LL1	0	221	0	0	0	0	0	NaN	NaN
SCO	none	2000	16246	39971	13036	21843	61449	101694	4985%	65%
SCO	TR1	7701	0	9616	4479	12835	13077	87699	1039%	571%
SCO	TR2	12285	4095	2828	0	2693	29426	3626	-70%	-88%

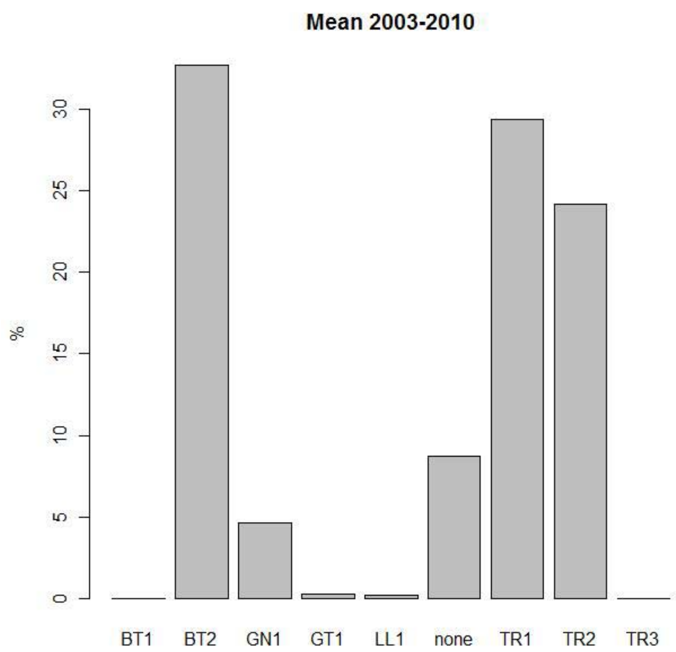
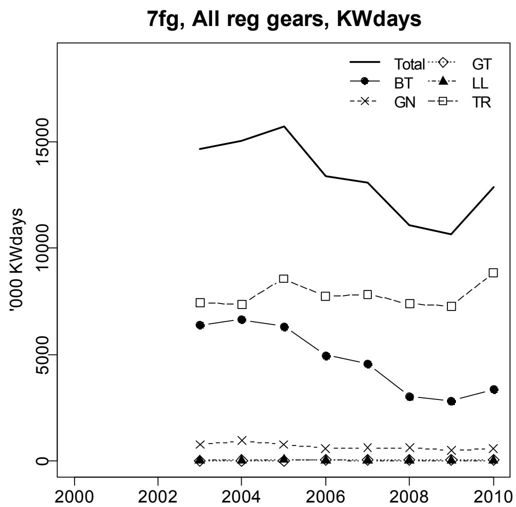


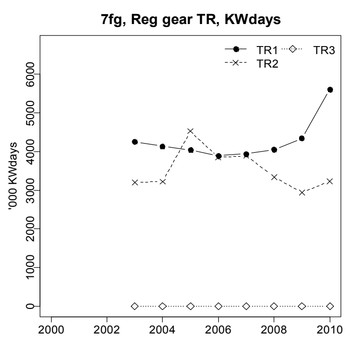
Figure 9.2.9. Contribution of each gear category to the total effort (kW*days) in the ICES Divisions VIIfg. Mean over 2003-2010.

The mean proportion of total effort over the period 2003-2010 (to exclude years with no Irish disaggregated data) of each gear category (Figure 9.2.9) shows that the fishery in this area is dominated (33%) by the BT2. TR1 and TR2 and contribute a further 29 and 24% respectively.



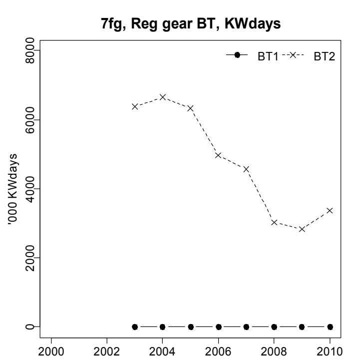
No Spanish data available

Fig. 9.2.10. Trend in nominal effort by gear types in the Celtic Sea (ICES Divisions VIIfg), 2003-2010.



No Spanish data available

Fig. 9.2.11. Trend in nominal effort for demersal trawl (Regulated Gear TR1, TR2 and TR3) in the Celtic Sea (ICES Divisions VIIfg), 2003-2010.



No Spanish data available

Fig. 9.2.12. Trend in nominal effort for beam trawl by mesh size range (Regulated Gear BT1, BT2) in the Celtic Sea (ICES Divisions VIIfg), 2000-2010.

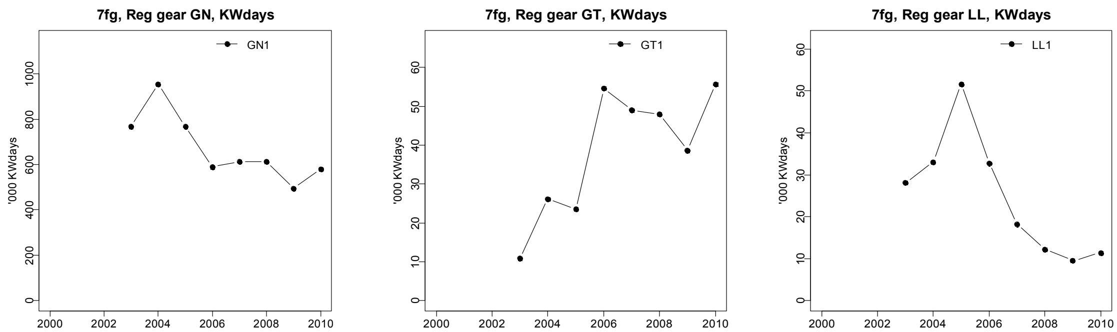


Fig. 9.2.13. Trend in nominal effort for beam trawl by mesh size range (Regulated Gear GT, GN1, LL1) in the Celtic Sea (ICES Divisions VIIfg), 2003-2010.

The total effort in area VIIfg has decreased by 16% since 2003. This decrease is mostly due to BT2 (a reduction of 29%). However in 2010, mostly all gear categories have increased and especially the gear category TR1 which increased by 30% in the last year.

Comparison between the two different area designations

The contributions to the total effort of the Celtic Sea as a whole (ICES Divisions VIIbc,e-k) and for the restricted area VIIfg differ depending of the country. England contributes less to the total in VIIfg (14%) than to the total Celtic Sea (20%). This is the opposite for Ireland which contributes 43% to the total in VIIfg but 21% in the whole Celtic Sea, and to a lesser extent Belgium (19% and 4% respectively). The contribution of France in Cel1 area is around 38% but only 23% in Cel2 over the period 2003-2010.

9.3. Catch estimates in the Celtic Sea area

Introduction

As last year, a number of figures were included in the report, displaying total landings (white) and discards (grey – when available) in weight for all regulated gears from 2003 to 2010 (Figures 9.3.1), as well as in landings and discards in numbers at age for cod (Figures 9.3.2).

Even though the discard information provided to the group improved this year, because of the limited availability and reliability of discard information for some species and from some countries contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition. In addition, the procedure used to raise discards and explained in section 5 may not be fully consistent with the procedures used in other contexts and therefore may not be directly comparable.

Table 9.3.1.1a. Landings of anglerfish by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
ANF	BT1	1	11	0	0	0	0	0	0
ANF	BT2	2338	2831	2876	2942	3232	2446	2467	3071
ANF	GN1	1915	2382	2824	1582	2261	3098	3059	1612
ANF	GT1	803	1284	1448	1094	1245	1253	1249	196
ANF	LL1	9	1	6	0	2	0	0	0
ANF	none	168	404	164	150	138	78	112	145
ANF	TR1	4689	4705	4112	5626	6023	4946	5490	4843
ANF	TR2	4526	4578	4812	4246	4713	3519	3308	1863
ANF	TR3	2	0	0	7	0	0	0	3

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
ANF	BT1	1	1	0	0	0	0	0	0
ANF	BT2	1164	1310	1163	1194	1149	804	842	1037
ANF	GN1	110	162	136	83	61	60	94	89
ANF	GT1	6	7	19	30	18	26	30	14
ANF	LL1	0	0	0	0	0	0	0	0
ANF	none	45	125	6	15	6	8	5	8
ANF	TR1	964	820	578	736	810	825	918	864
ANF	TR2	403	448	513	496	645	581	479	406
ANF	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1b. Landings of cod by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
COD	BT1	0	1	0	0	0	0	0	0
COD	BT2	301	328	449	352	323	222	184	205
COD	GN1	140	175	202	216	222	178	183	153
COD	GT1	14	9	12	8	10	13	12	24
COD	LL1	15	5	4	20	3	3	2	3
COD	none	31	87	6	4	6	12	6	19
COD	TR1	2541	1275	808	914	994	900	963	1454
COD	TR2	1056	568	781	853	858	722	668	723
COD	TR3	0	0	0	0	0	0	0	3

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
COD	BT1	0	0	0	0	0	0	0	0
COD	BT2	222	249	347	269	224	154	114	141
COD	GN1	77	131	164	170	174	143	133	107
COD	GT1	1	0	1	1	3	2	2	2
COD	LL1	1	0	2	2	0	0	0	0
COD	none	25	77	4	3	2	6	1	2
COD	TR1	2078	1023	626	677	753	618	671	974
COD	TR2	381	288	438	461	361	303	276	349
COD	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1c. Landings of haddock by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
HAD	BT1	0	1	0	0	0	0	0	0
HAD	BT2	365	410	485	344	344	303	374	398
HAD	GN1	143	134	142	102	115	89	102	106
HAD	GT1	0	0	0	0	2	0	1	2
HAD	LL1	8	9	15	14	8	1	0	2
HAD	none	64	254	32	15	16	26	5	25
HAD	TR1	3365	4088	2714	2200	2963	3693	4577	6365
HAD	TR2	1734	1505	1644	1381	1528	1394	1792	1881
HAD	TR3	3	1	1	3	3	2	4	9

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
HAD	BT1	0	0	0	0	0	0	0	0
HAD	BT2	265	324	396	298	286	240	281	315
HAD	GN1	68	96	90	57	74	68	68	70
HAD	GT1	0	0	0	0	1	0	0	0
HAD	LL1	0	1	1	1	0	0	0	0
HAD	none	36	162	14	7	5	9	3	8
HAD	TR1	1985	2985	1863	1296	1900	2206	2683	3905
HAD	TR2	567	714	911	728	683	533	811	679
HAD	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1d. Landings of hake by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
HKE	BT1	0	0	0	0	0	0	0	0
HKE	BT2	111	82	77	78	71	46	54	72
HKE	GN1	1992	2111	1910	1578	1383	1149	1692	3868
HKE	GT1	5	3	5	7	6	4	2	10
HKE	LL1	45	25	69	527	1080	1388	532	832
HKE	none	31	74	16	2	23	3	16	145
HKE	TR1	1511	1554	1786	1618	1619	1264	1246	2123
HKE	TR2	575	555	593	461	421	387	334	483
HKE	TR3	0	0	0	0	0	0	0	0

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
HKE	BT1	0	0	0	0	0	0	0	0
HKE	BT2	77	56	56	60	59	30	29	51
HKE	GN1	309	348	402	192	264	411	472	309
HKE	GT1	0	0	0	3	3	2	0	1
HKE	LL1	0	5	3	1	0	0	0	0
HKE	none	13	44	1	0	1	1	0	1
HKE	TR1	179	172	159	193	235	252	273	619
HKE	TR2	138	137	130	127	117	109	83	117
HKE	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1e. Landings of Nephrops by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
NEP	BT1	0	0	0	0	0	0	0	0
NEP	BT2	78	96	105	93	87	35	34	22
NEP	GN1	1	16	15	5	0	4	2	0
NEP	GT1	1	0	0	0	0	0	0	2
NEP	LL1	1	0	0	0	0	0	0	0
NEP	none	87	426	110	37	53	79	26	16
NEP	TR1	1276	1276	1690	1386	1440	1730	1899	1982
NEP	TR2	3379	2696	4039	3416	5234	4975	3537	4471
NEP	TR3	9	0	0	2	0	0	0	1

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
NEP	BT1	0	0	0	0	0	0	0	0
NEP	BT2	67	79	88	86	84	33	33	22
NEP	GN1	0	13	10	4	0	4	2	0
NEP	GT1	1	0	0	0	0	0	0	0
NEP	LL1	0	0	0	0	0	0	0	0
NEP	none	54	338	12	27	22	65	15	2
NEP	TR1	831	691	854	745	885	1364	1519	1461
NEP	TR2	2057	1721	2527	1862	3156	3216	2350	2732
NEP	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1 f. Landings of plaice by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
PLE	BT1	0	0	0	0	0	23	0	0
PLE	BT2	1187	1149	1001	945	784	704	786	821
PLE	GN1	4	10	7	4	3	3	6	7
PLE	GT1	9	16	22	12	8	3	3	7
PLE	LL1	0	0	0	0	0	0	0	0
PLE	none	26	39	37	17	16	14	25	13
PLE	TR1	192	145	103	94	96	137	162	212
PLE	TR2	458	389	416	468	411	437	434	448
PLE	TR3	0	0	0	1	2	1	4	2

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
PLE	BT1	0	0	0	0	0	0	0	0
PLE	BT2	292	253	194	173	185	143	173	157
PLE	GN1	0	1	1	1	0	0	0	1
PLE	GT1	0	0	0	0	0	0	0	0
PLE	LL1	0	0	0	0	0	0	0	0
PLE	none	8	6	2	1	1	0	2	2
PLE	TR1	135	102	72	58	67	97	102	126
PLE	TR2	72	68	66	96	99	127	126	102
PLE	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1g. Landings of saithe by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
POK	BT1	0	0	0	0	0	0	0	0
POK	BT2	14	15	11	3	1	1	2	1
POK	GN1	408	332	283	197	200	134	221	277
POK	GT1	1	0	1	1	6	4	0	4
POK	LL1	0	1	2	0	4	0	0	0
POK	none	22	72	5	1	0	3	16	2
POK	TR1	247	595	173	195	205	142	170	250
POK	TR2	141	109	94	40	48	18	20	17

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
POK	BT1	0	0	0	0	0	0	0	0
POK	BT2	12	13	10	3	1	1	1	1
POK	GN1	179	206	149	112	120	76	126	108
POK	GT1	0	0	0	0	3	1	0	1
POK	LL1	0	0	0	0	0	0	0	0
POK	none	7	44	0	0	0	0	0	1
POK	TR1	84	45	35	33	31	20	20	15
POK	TR2	44	55	66	24	22	6	8	4

Table 9.3.1.1h. Landings of sole by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
SOL	BT1	0	1	0	0	0	0	0	0
SOL	BT2	1474	1413	1549	1393	1355	1127	1033	1138
SOL	GN1	14	24	17	7	12	15	19	11
SOL	GT1	39	43	77	41	47	33	33	24
SOL	LL1	0	0	0	0	0	0	0	0
SOL	none	58	60	98	54	68	48	43	54
SOL	TR1	127	92	86	74	73	80	80	103
SOL	TR2	372	320	366	387	414	359	379	344
SOL	TR3	0	0	0	0	0	0	1	1

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
SOL	BT1	0	0	0	0	0	0	0	0
SOL	BT2	1010	965	841	731	748	609	622	698
SOL	GN1	2	1	1	2	1	0	0	0
SOL	GT1	0	2	0	0	0	0	0	2
SOL	LL1	0	0	0	0	0	0	0	0
SOL	none	4	5	3	2	5	0	2	4
SOL	TR1	77	43	39	33	39	34	34	31
SOL	TR2	37	51	60	78	86	78	100	109
SOL	TR3	0	0	0	0	0	0	0	0

Table 9.3.1.1 i. Landings of whiting by gear category. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
WHG	BT1	0	0	0	0	0	0	0	0
WHG	BT2	276	253	280	130	148	138	92	111
WHG	GN1	136	132	93	42	37	36	30	37
WHG	GT1	1	0	1	1	4	0	0	2
WHG	LL1	3	5	5	11	7	2	1	4
WHG	none	287	687	60	60	30	53	15	840
WHG	TR1	4730	3983	5092	4166	3221	2524	3146	4342
WHG	TR2	4561	4149	6467	4625	5079	2666	2698	3298
WHG	TR3	0	0	0	1	0	0	3	4

Reg Area 7fg

SPECIES	REG_GEA	2003.L	2004.L	2005.L	2006.L	2007.L	2008.L	2009.L	2010.L
WHG	BT1	0	0	0	0	0	0	0	0
WHG	BT2	184	181	219	82	101	88	52	77
WHG	GN1	52	104	39	13	17	14	10	15
WHG	GT1	0	0	0	0	0	0	0	0
WHG	LL1	0	0	0	0	0	0	0	0
WHG	none	224	597	17	49	12	20	3	3
WHG	TR1	3559	3236	4222	3513	2645	1916	2316	2926
WHG	TR2	2143	2481	4832	3344	3575	1144	971	1616
WHG	TR3	0	0	0	1	0	0	0	0

Celtic Sea overall area, all species

Figure 9.3.1. shows that landings from the Celtic Sea are dominated by anglerfish whiting and haddock. Hake and Cod also contribute substantially.

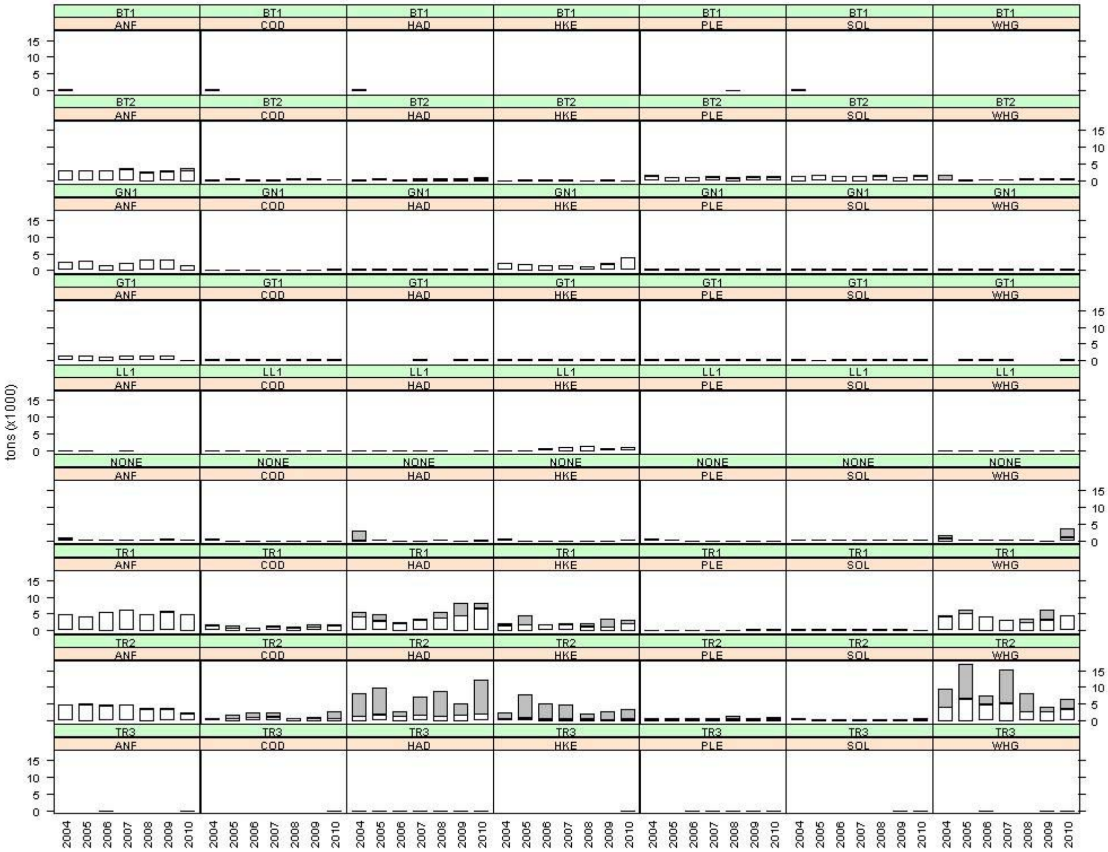


Figure 9.3.1. Landings (t) (in white) and discard (t) (in grey) by gear grouping and species, 2003-2010 (from left to right) in the Celtic Sea (ICES Divisions VIIbc,e-k).

Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some species and from some countries contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

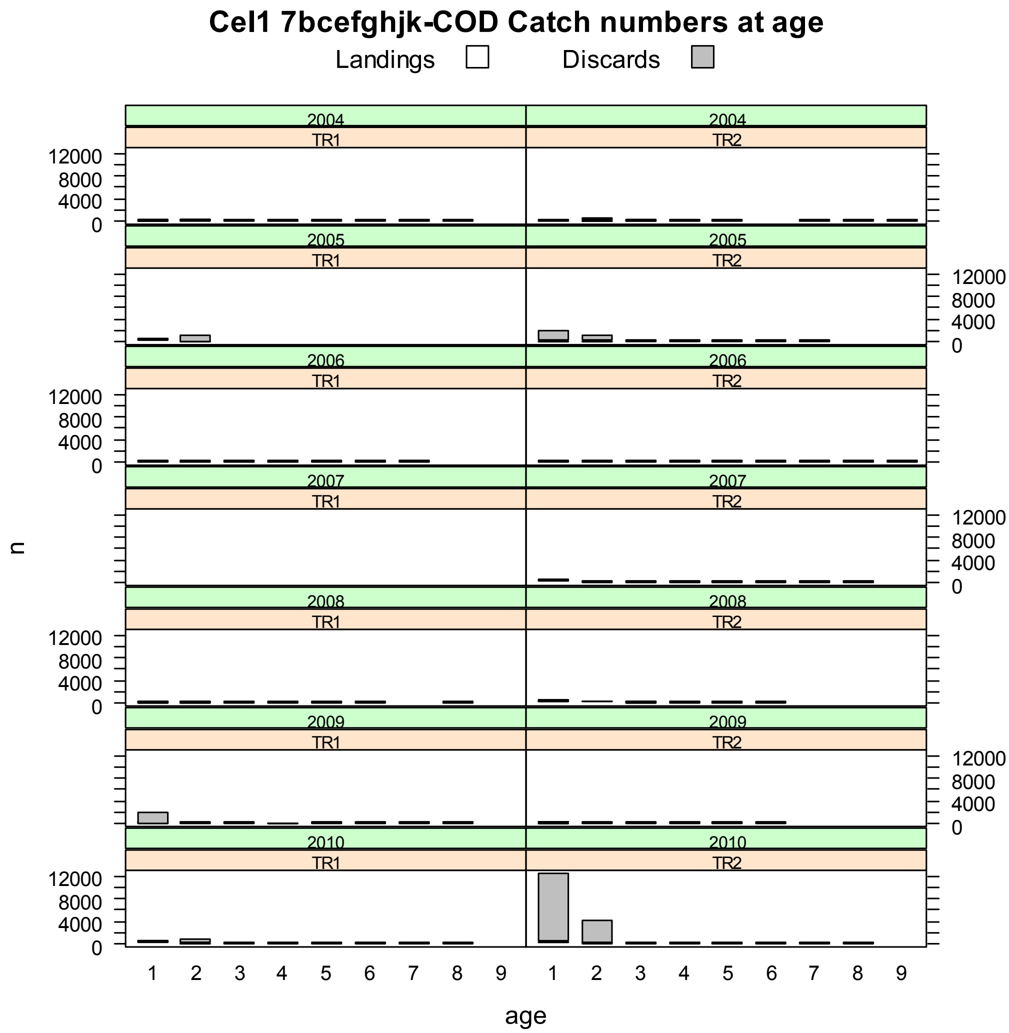


Figure 9.3.2. Landings (t) (in white) and discard (t) (in grey) for Cod by age and gear grouping, 2003-2010 in the Celtic Sea (ICES Divisions VIIbc,e-k).

Note that discard data are only available for some years and gears, so the lack of discard information for a given year/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

However the higher discards numbers observed for 2009 and 2010 might be due to the higher recruitments observed these years compared to the rest of the time series (WGCSE 2011).

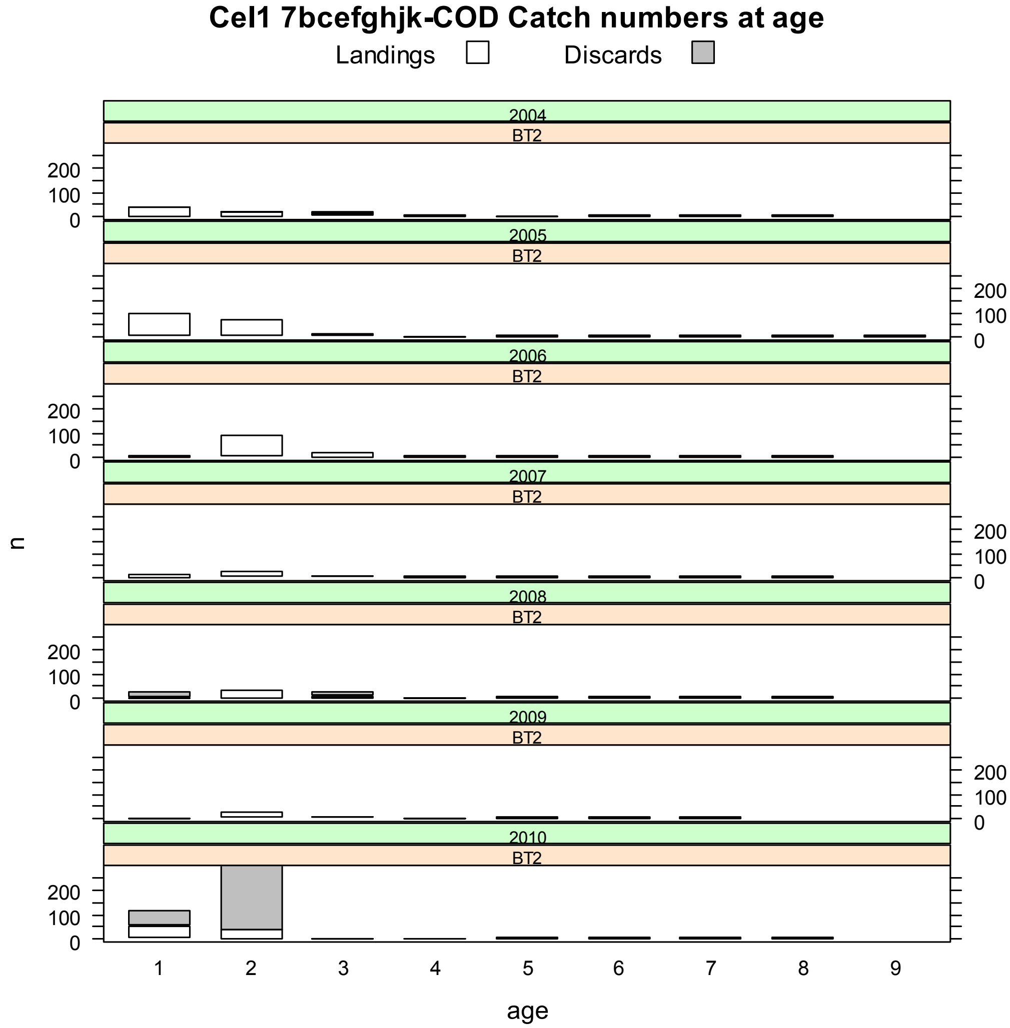


Figure 9.3.2. Continued Landings (t) (in white) and discard (t) (in grey) for cod by age and gear grouping, 2003-2010 in the Celtic Sea (ICES Divisions VIIbc,e-k).

Note that discard data are only available for some years and gears, so the lack of discard information for a given years/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

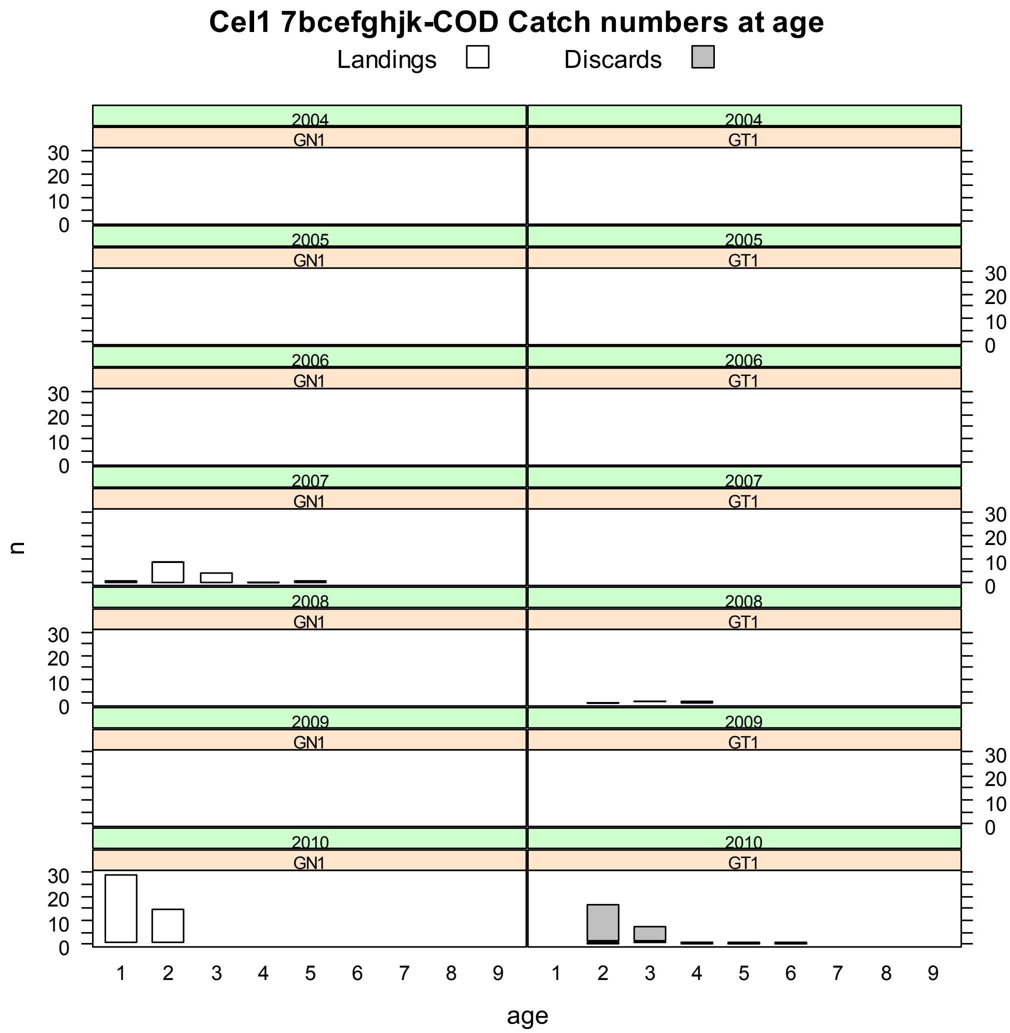


Figure 9.3.2. Continued Landings (t) (in white) and discard (t) (in grey)for cod by age and gear grouping, 2003-2010 in the Celtic Sea (ICES Divisions VIIbc,e-k). Note that discard data are only available for some years and gears, so the lack of discard information for a given year/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

VIIfg subset of Celtic sea

Because anglerfish and hake are mainly taken with nets and lines on the shelf of the Celtic Sea, it is not surprising to see that their contributions to the landings of the VIIfg area are much lower than for the whole Celtic Sea. Whiting, haddock, Nephrops, anglerfish and cod are the major contributors to the landings in that area.

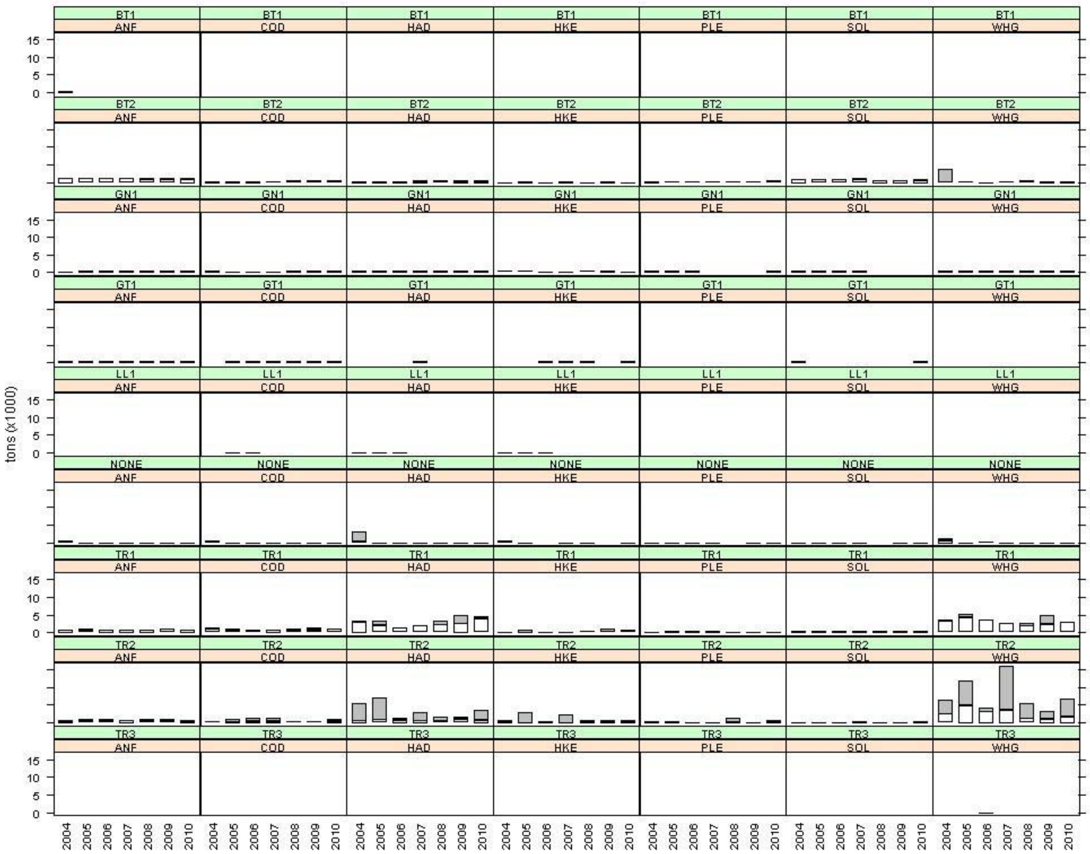


Figure 9.3.4. Landings (t) (in white) and discard (t) (in grey) by gear grouping and species, 2003-2010 (from left to right) in the Celtic Sea (ICES Divisions VIIfg).

Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

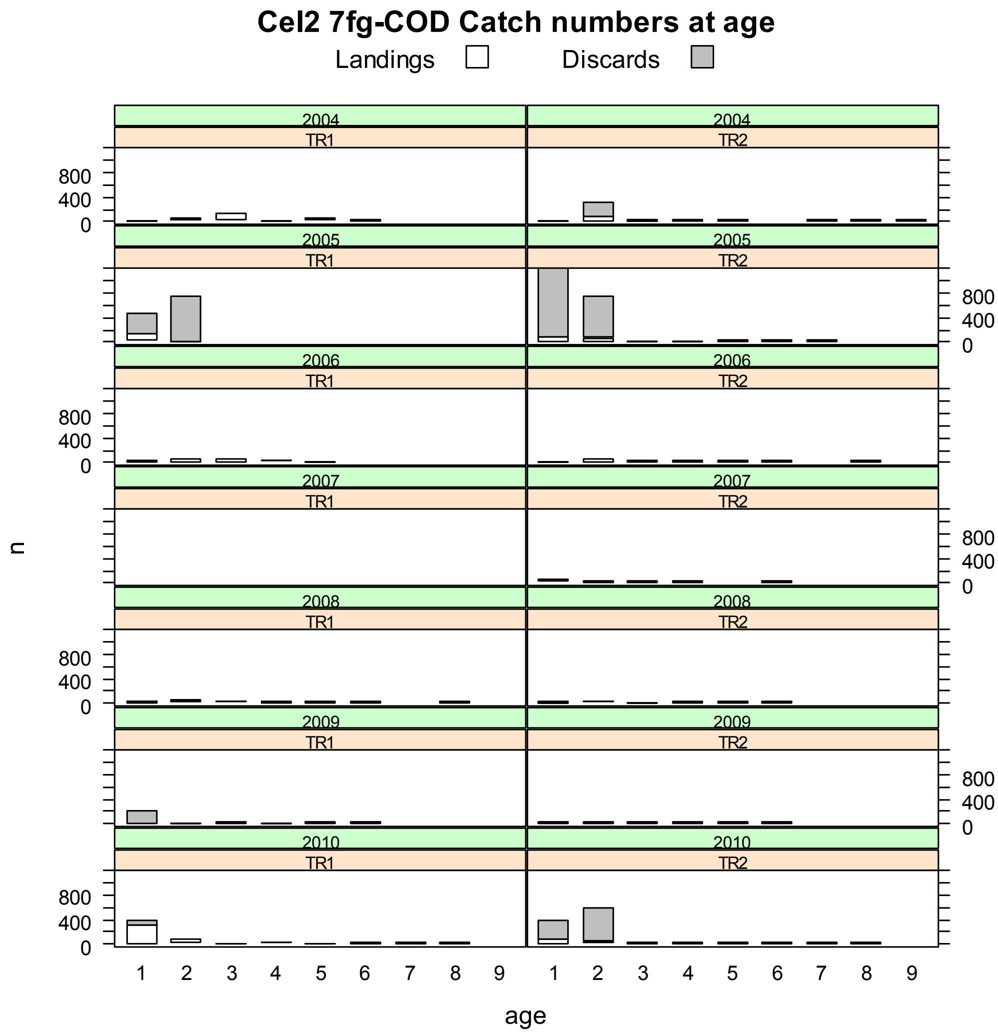


Figure 9.3.5. Landings (t) (in white) and discard (t) (in grey) for cod by age and gear grouping, 2003-2010 in the Celtic Sea (ICES Divisions VIIfg).

Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

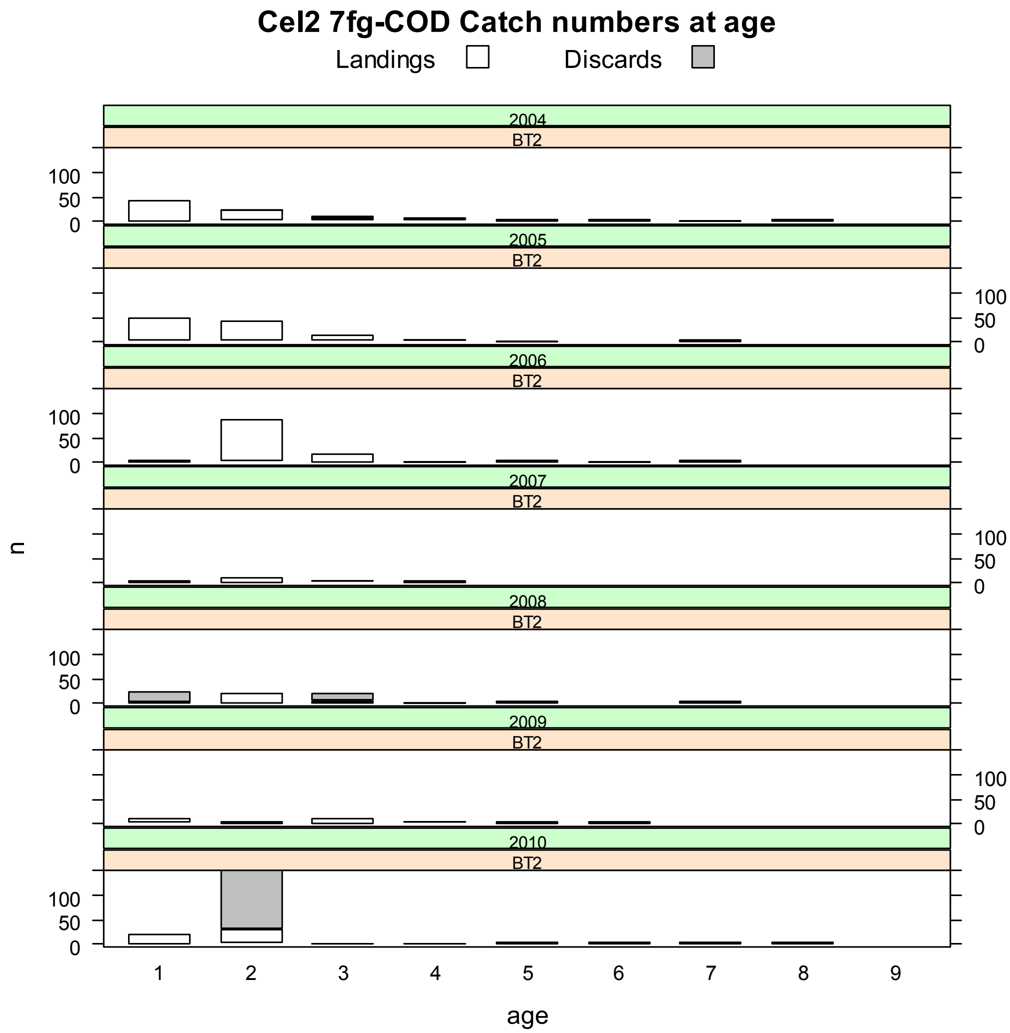


Figure 9.3.5. Continued Landings (t) (in white) and discard (t) (in grey) for cod by age and gear grouping, 2003-2010 in the Celtic Sea (ICES Divisions VIIfg).

Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

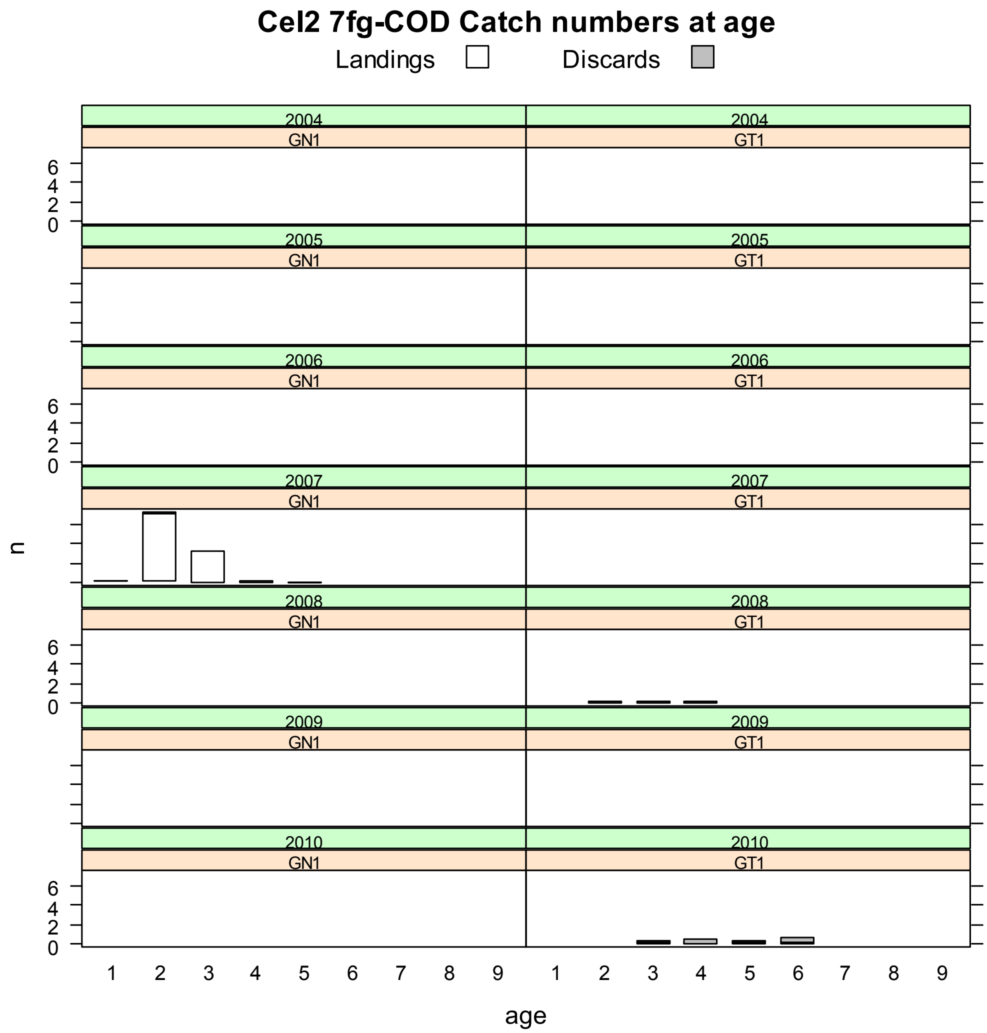


Figure 9.3.5. Continued Landings (t) (in white) and discard (t) (in grey) for cod by age and gear grouping, 2003-2010 in the Celtic Sea (ICES Divisions VIIfg).

Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

Landings of cod are mostly due to TR1 (Table 9.3.2) (about 49% of the total for the whole Celtic Sea over the period 2003-2010 and 56% for Divisions VIIfg), while the TR2 category represents 31% and 22% of these areas respectively, and BT2 12 and 13% respectively .

Table 9.3.2. Cod landings by gear category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

SPECIES	REG GEAR	2003	2004	2005	2006	2007	2008	2009	2010	Mean Contribution 2003-2010
COD	BT1	0	1	0	0	0	0	0	0	0%
COD	BT2	301	328	449	352	323	222	184	205	12%
COD	GN1	140	175	202	216	222	178	183	153	7%
COD	GT1	14	9	12	8	10	13	12	24	1%
COD	LL1	15	5	4	20	3	3	2	3	0%
COD	none	31	87	6	4	6	12	6	19	1%
COD	TR1	2541	1275	808	914	994	900	963	1454	49%
COD	TR2	1056	568	781	853	858	722	668	723	31%
COD	TR3	0	0	0	0	0	0	0	3	0%
COD	Total	4098	2448	2262	2367	2416	2050	2018	2584	100%

SPECIES	REG GEAR	2003	2004	2005	2006	2007	2008	2009	2010	Mean Contribution 2003-2010
COD	BT1	0	0	0	0	0	0	0	0	0%
COD	BT2	222	249	347	269	224	154	114	141	13%
COD	GN1	77	131	164	170	174	143	133	107	8%
COD	GT1	1	0	1	1	3	2	2	2	0%
COD	LL1	1	0	2	2	0	0	0	0	0%
COD	none	25	77	4	3	2	6	1	2	1%
COD	TR1	2078	1023	626	677	753	618	671	974	56%
COD	TR2	381	288	438	461	361	303	276	349	22%
COD	TR3	0	0	0	0	0	0	0	0	0%
COD	Total	2785	1768	1582	1583	1517	1226	1197	1575	100%

9.4. *Celtic Sea LPUE*

Given the improvement in discard reported to the group, it has been decided to present both the LPUE and the CPUE. Tables 9.4.1 – 9.4.3 summarize the available information for cod, hake and Nephrops respectively.

However, due to the limited availability and reliability of discard information for some years and from some gears contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

Table 9.4.1.1 Cod LPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

ANNEX	SPECIES	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	mean LPUE 2008-2010
Cel1	COD	BT1	0	19	0	0	0	0	0	0	0
Cel1	COD	BT2	23	25	34	32	31	29	27	27	28
Cel1	COD	GN1	24	28	37	59	55	44	46	37	42
Cel1	COD	GT1	16	9	11	5	6	12	11	23	15
Cel1	COD	LL1	17	6	4	14	2	2	3	3	2
Cel1	COD	none	1	3	0	0	0	1	0	1	0
Cel1	COD	TR1	154	81	54	62	69	71	77	86	79
Cel1	COD	TR2	58	30	37	43	43	49	48	49	49
Cel1	COD	TR3	0	0	0	0	0	0	0	43	21

Reg Area 7fg

ANNEX	SPECIES	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	mean LPUE 2008-2010
Cel2	COD	BT1	0	0	0	0	0	0	0	0	0
Cel2	COD	BT2	35	37	55	54	49	51	40	42	44
Cel2	COD	GN1	100	137	212	288	283	235	267	186	227
Cel2	COD	GT1	92	0	42	18	61	42	52	36	42
Cel2	COD	LL1	36	0	39	61	0	0	0	0	0
Cel2	COD	none	15	36	3	4	2	6	1	1	2
Cel2	COD	TR1	489	247	155	174	191	152	154	174	161
Cel2	COD	TR2	118	90	97	120	93	91	94	108	98
Cel2	COD	TR3	0	0	0	0	0	0	0	0	0

Table 9.4.1.2 Cod CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

ANNEX	SPECIES	REG GEAR COD	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
Cel1	COD	BT1	0	19	0	0	0	0	0	0	0
Cel1	COD	BT2	23	25	34	32	40	31	32	53	39
Cel1	COD	GN1	24	28	37	59	55	44	48	37	43
Cel1	COD	GT1	16	9	11	5	6	12	11	108	43
Cel1	COD	LL1	17	6	4	14	2	2	3	3	2
Cel1	COD	none	1	4	0	0	0	1	0	1	0
Cel1	COD	TR1	154	83	98	62	69	81	152	99	110
Cel1	COD	TR2	115	41	87	125	111	54	74	194	108
Cel1	COD	TR3	0	0	0	0	0	0	0	43	21

ANNEX	SPECIES	REG GEAR COD	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
Cel2	COD	BT1	0	0	0	0	0	0	0	0	0
Cel2	COD	BT2	35	38	55	54	71	58	50	64	58
Cel2	COD	GN1	100	137	212	288	283	235	277	186	230
Cel2	COD	GT1	92	0	42	18	61	42	52	341	162
Cel2	COD	LL1	36	0	39	61	0	0	0	0	0
Cel2	COD	none	15	42	3	4	2	6	1	1	2
Cel2	COD	TR1	490	251	269	174	191	176	289	191	217
Cel2	COD	TR2	404	125	239	318	293	103	138	273	172
Cel2	COD	TR3	0	0	0	0	0	0	0	0	0

Table 9.4.2.1. Hake LPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

ANNEX	SPECIES	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	mean LPUE 2008-2010
Cel1	HKE	BT1	0	0	0	0	0	0	0	0	0
Cel1	HKE	BT2	9	6	6	7	7	6	8	10	8
Cel1	HKE	GN1	350	338	355	430	340	281	428	943	553
Cel1	HKE	GT1	6	3	4	5	3	4	2	9	5
Cel1	HKE	LL1	52	36	81	367	648	917	715	881	860
Cel1	HKE	none	1	3	1	0	1	0	1	5	2
Cel1	HKE	TR1	91	99	120	110	113	100	99	126	110
Cel1	HKE	TR2	31	29	28	23	21	26	24	33	28
Cel1	HKE	TR3	0	0	0	0	0	0	0	0	0

Reg Area 7fg

ANNEX	SPECIES	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	mean LPUE 2008-2010
Cel2	HKE	BT1	0	0	0	0	0	0	0	0	0
Cel2	HKE	BT2	12	8	9	12	13	10	10	15	12
Cel2	HKE	GN1	404	364	522	324	429	670	954	531	705
Cel2	HKE	GT1	0	0	0	55	41	42	0	18	21
Cel2	HKE	LL1	0	151	58	31	0	0	0	0	0
Cel2	HKE	none	8	21	1	0	1	0	0	1	0
Cel2	HKE	TR1	42	42	39	50	60	62	63	110	82
Cel2	HKE	TR2	43	43	29	33	30	33	28	36	33
Cel2	HKE	TR3	0	0	0	0	0	0	0	0	0

Table 9.4.2.2. Hake CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

ANNE	SPECIE	REG GEAR COD	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
Cel1	HKE	BT1	0	0	0	0	0	0	0	0	0
Cel1	HKE	BT2	9	6	22	16	12	10	28	12	16
Cel1	HKE	GN1	350	338	355	430	340	281	511	943	580
Cel1	HKE	GT1	6	3	4	5	3	4	2	398	133
Cel1	HKE	LL1	52	36	81	367	648	917	715	881	860
Cel1	HKE	none	1	7	1	0	1	0	1	5	2
Cel1	HKE	TR1	114	129	313	110	113	162	288	186	210
Cel1	HKE	TR2	174	132	364	254	233	132	204	224	186
Cel1	HKE	TR3	0	0	0	0	0	0	0	43	21

ANNE	SPECIE	REG GEAR COD	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
Cel2	HKE	BT1	0	0	0	0	0	0	0	0	0
Cel2	HKE	BT2	12	8	32	14	28	19	55	20	30
Cel2	HKE	GN1	404	364	522	324	429	670	1176	531	770
Cel2	HKE	GT1	0	0	0	55	41	42	0	36	28
Cel2	HKE	LL1	0	151	58	31	0	0	0	0	0
Cel2	HKE	none	8	56	2	0	1	0	0	1	0
Cel2	HKE	TR1	46	47	207	50	60	127	241	158	175
Cel2	HKE	TR2	387	191	650	112	607	173	167	165	168
Cel2	HKE	TR3	0	0	0	0	0	0	0	0	0

Table 9.4.3. Nephrops LPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

Reg Area 7bcefghjk

ANNEX	SPECIES	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	mean LPUE 2008-2010
Cel1	NEP	BT1	0	0	0	0	0	0	0	0	0
Cel1	NEP	BT2	6	7	8	9	8	5	5	3	4
Cel1	NEP	GN1	0	3	3	1	0	1	1	0	0
Cel1	NEP	GT1	1	0	0	0	0	0	0	2	1
Cel1	NEP	LL1	1	0	0	0	0	0	0	0	0
Cel1	NEP	none	4	16	5	2	2	4	1	1	2
Cel1	NEP	TR1	77	81	114	94	100	137	151	118	134
Cel1	NEP	TR2	185	142	192	174	264	336	255	305	299
Cel1	NEP	TR3	437	0	0	61	0	0	0	14	7

Reg Area 7fg

ANNEX	SPECIES	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	mean LPUE 2008-2010
Cel2	NEP	BT1	0	0	0	0	0	0	0	0	0
Cel2	NEP	BT2	11	12	14	17	18	11	12	7	10
Cel2	NEP	GN1	0	13	12	7	0	7	4	0	4
Cel2	NEP	GT1	92	0	0	0	0	0	0	0	0
Cel2	NEP	LL1									
Cel2	NEP	none	34	158	12	34	23	68	13	1	22
Cel2	NEP	TR1	196	167	211	192	225	337	350	261	310
Cel2	NEP	TR2	643	534	558	485	811	964	800	846	873
Cel2	NEP	TR3	0	0	0	0	0	0	0	0	0

Table 9.4.3. Nephrops CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2010. Left: Celtic Sea, Right : Divisions VIIfg

ANNE	SPECIE	REG GEAR COD	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
Cel1	NEP	BT1	0	0	0	0	0	0	0	0	0
Cel1	NEP	BT2	6	7	8	9	8	5	5	3	4
Cel1	NEP	GN1	0	3	3	1	0	1	1	0	0
Cel1	NEP	GT1	1	0	0	0	0	0	0	2	1
Cel1	NEP	LL1	1	0	0	0	0	0	0	0	0
Cel1	NEP	none	4	17	5	2	2	4	1	1	2
Cel1	NEP	TR1	77	81	114	94	100	137	151	122	135
Cel1	NEP	TR2	185	142	192	174	264	336	353	305	331
Cel1	NEP	TR3	437	0	0	61	0	0	0	14	7

ANNE	SPECIE	REG GEAR COD	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2008-2010
Cel2	NEP	BT1	0	0	0	0	0	0	0	0	0
Cel2	NEP	BT2	11	12	14	17	18	11	12	7	10
Cel2	NEP	GN1	0	13	12	7	0	7	4	0	4
Cel2	NEP	GT1	92	0	0	0	0	0	0	0	0
Cel1	NEP	LL1	0	0	0	0	0	0	0	0	0
Cel2	NEP	none	34	158	12	34	23	68	13	1	22
Cel2	NEP	TR1	196	167	211	192	225	337	350	270	314
Cel2	NEP	TR2	643	534	558	485	811	964	1113	846	970
Cel2	NEP	TR3	0	0	0	0	0	0	0	0	0

LPUE 7 bcefghjk

LPUE 7 fg

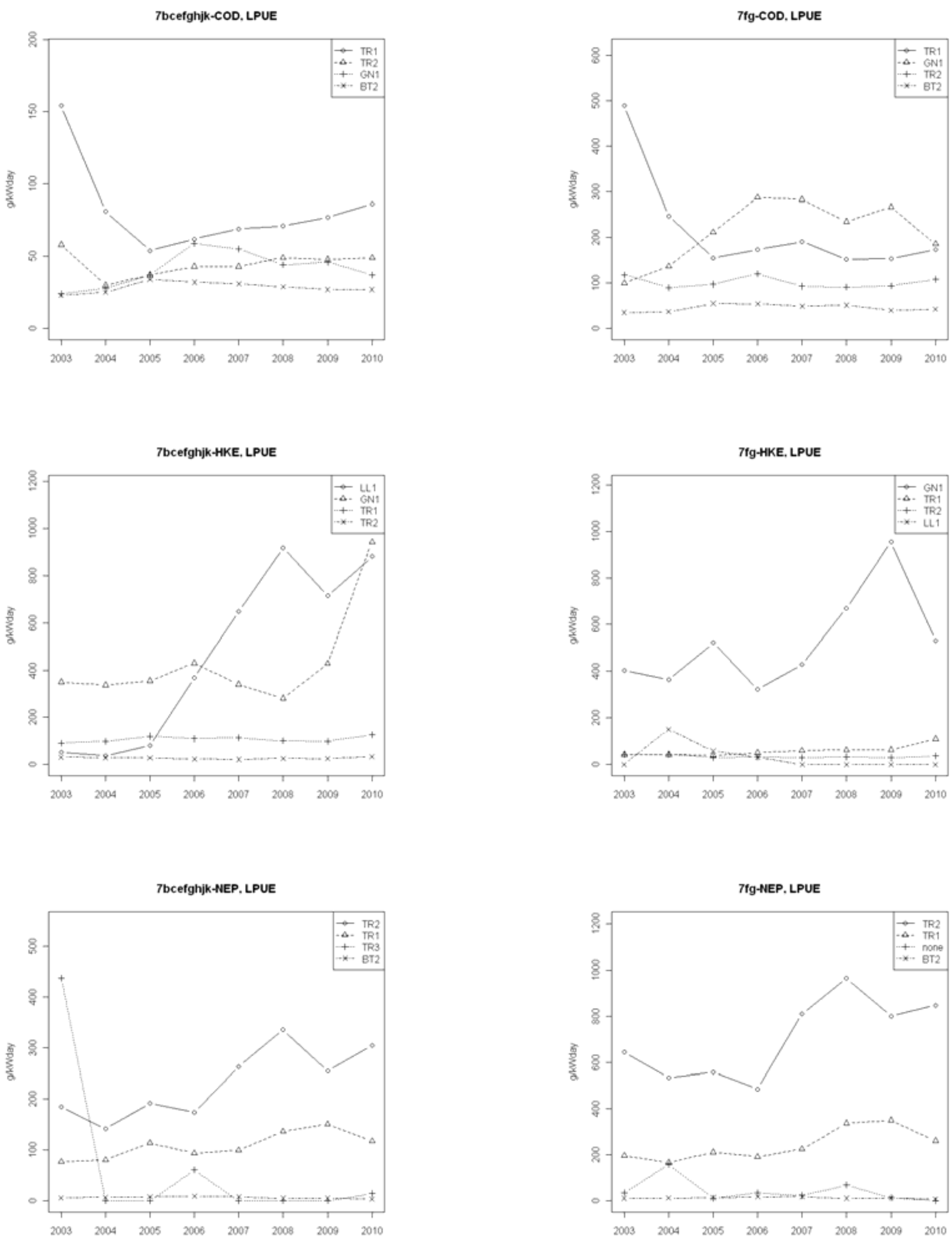


Figure 9.4.1.1 LPUE for cod, hake and Nephrops (from top to bottom) and for Celtic Sea and VIIfg (from left to right) and for gear category and years 2003-2010.

CPUE 7 bcefghjk

CPUE 7 fg

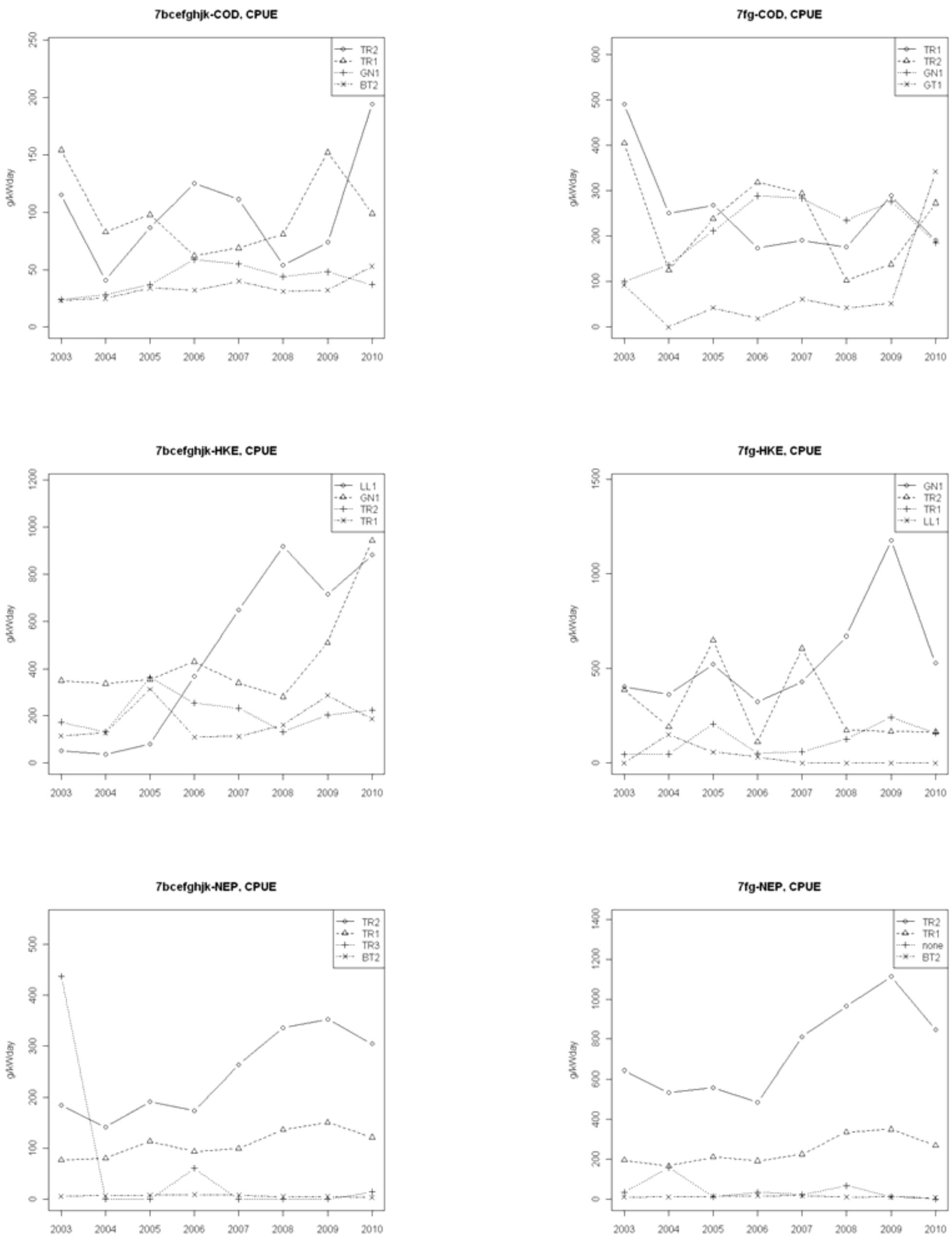


Figure 9.4.1.2 CPUE for cod, hake and Nephrops (from top to bottom) and for Celtic Sea and VIIfg (from left to right) and for gear category and years 2003-2010.

Figure 9.4.1.1 shows that after a decrease in the earlier period (2003-2005) of around 60%, the LPUE of cod for the category contributing most to the landings (TR1), experiences an increase in recent years for the whole Celtic Sea, for area VIIfg, the LPUE seems to fluctuate around the value observed in 2005.

Comparison of the two regions Cel1and Cel2

Table 9.4.1.1 and Figure 9.4.2.1 suggest that LPUE of cod are much higher in VIIfg than in the Celtic Sea as a whole for most/all the gear and mesh size-category. This is particularly the case for the two main categories, TR1 and TR2 for which the cod CPUE are 2 times higher.

9.5. Celtic sea Ranked gear categories

Tables 9.5.1 and 9.5.2 provide an indication of the ranking (highest first) of cod landings in different gear categories for Celtic Sea overall and VIIfg part of Celtic Sea.

Table 9.5.1. Celtic Sea - Ranked derogations according to relative cod landings in weight (t) 2003-2010. Ranking is according to 2010.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel
Cel1	7bcefghjk	COD	TR1	62,46%	54,00%	35,83%	38,71%	41,24%	44,21%	47,89%	56,71%
Cel1	7bcefghjk	COD	TR2	25,96%	24,06%	34,59%	36,08%	35,59%	35,43%	33,22%	28,20%
Cel1	7bcefghjk	COD	BT2	7,42%	13,85%	19,93%	14,89%	13,41%	10,84%	9,15%	7,96%
Cel1	7bcefghjk	COD	GN1	3,44%	7,45%	8,95%	9,18%	9,18%	8,78%	9,10%	5,97%
Cel1	7bcefghjk	COD	GT1	0,34%	0,38%	0,53%	0,30%	0,46%	0,59%	0,55%	0,94%
Cel1	7bcefghjk	COD	TR3	0,00%	0,00%	0,00%	0,00%		0,00%	0,00%	0,12%
Cel1	7bcefghjk	COD	LL1	0,37%	0,21%	0,18%	0,85%	0,13%	0,15%	0,10%	0,12%
Cel1	7bcefghjk	COD	BT1		0,04%				0,00%		

Table 9.5.2. Divisions VIIfg - Ranked derogations according to relative cod landings in weight (t) 2003-2010. Ranking is according to 2010

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel
Cel2	7fg	COD	TR1	75,32%	60,50%	39,65%	42,88%	49,57%	50,61%	56,11%	61,84%
Cel2	7fg	COD	TR2	13,81%	17,09%	27,74%	29,10%	23,86%	24,82%	23,12%	22,22%
Cel2	7fg	COD	BT2	8,05%	14,73%	21,98%	17,02%	14,83%	12,61%	9,55%	8,95%
Cel2	7fg	COD	GN1	2,76%	7,69%	10,39%	10,75%	11,54%	11,79%	11,14%	6,86%
Cel2	7fg	COD	GT1	0,04%	0,00%	0,06%	0,13%	0,20%	0,16%	0,08%	0,13%
Cel2	7fg	COD	LL1	0,04%		0,19%	0,13%	0,00%		0,00%	0,00%
Cel2	7fg	COD	TR3			0,00%	0,00%				
Cel2	7fg	COD	BT1		0,00%						

In both areas, category TR1 contributes around 60% to the total landings of cod.

9.6. Celtic Sea Unregulated/Unallocated gear

Table 9.2.2. gives the trends of the effort reported in this category. Given the category definition, it refers to non-regulated gear (pots etc.) only.

9.7. Celtic Sea Under 10m

Information for French, English and Irish under 10m fleets were available. Irish information was not available by gear type, therefore in the following tables, data for Irish fleets are aggregated in the 'none' category. Tables 9.7.1 to 9.7.6 present landings for plaice, sole and cod by all gear types used by these vessels in the Celtic Sea and in Divisions VIIfg. Information for other countries is given by gear type, however this information is known to be incomplete.

Table 9.7.1. Plaice landings from vessels under 10m and gear grouping in ICES Divisions VIIb-k. Note: Partial information.

COUNTRY	SPECIES	REG_GEA	2003	2004	2005	2006	2007	2008	2009	2010
ENG	PLE	BT2	0	0	5	15	4	2	0	0
	PLE	GN1	4	7	3	14	13	10	11	13
	PLE	GT1	0	0	0	2	0	0	0	0
	PLE	LL1	0	0	0	0	0	0	0	0
	PLE	none	68	46	26	9	3	3	4	1
	PLE	TR1	0	0	0	0	0	0	1	1
	PLE	TR2	19	20	16	100	81	75	60	65
	PLE	Total	91	73	50	140	101	90	76	80
FRA	PLE	BT2	0	2	0	0	0	0	0	3
	PLE	GN1	4	5	4	4	3	0	0	7
	PLE	GT1	7	8	10	16	16	2	2	17
	PLE	LL1	0	0	0	0	0	0	0	0
	PLE	none	1	1	6	1	0	0	0	4
	PLE	TR1	3	0	0	1	0	0	0	0
	PLE	TR2	8	5	8	4	5	1	1	11
	PLE	TR3	0	0	0	0	0	0	0	0
	PLE	Total	23	21	28	26	24	3	3	42
GBG	PLE	GN1	0	0	0	0	0	0	0	0
	PLE	TR2	0	0	0	0	0	0	0	0
	PLE	Total	0	0	0	0	0	0	0	0
GBJ	PLE	TR2	0	0	0	0	0	0	0	0
	PLE	Total	0	0	0	0	0	0	0	0
IRL	PLE	none	4	1	1	1	1	2	1	2
	PLE	Total	4	1	1	1	1	2	1	2
NIR	PLE	TR2	0	0	0	1	0	1	1	0
	PLE	Total	0	0	0	1	0	1	1	0
SCO	PLE	none	0	0	0	0	0	0	0	0
	PLE	TR2	0	0	1	0	0	0	0	0
	PLE	Total	0	0	1	0	0	0	0	0

Table 9.7.2. Plaice landings from vessels under 10m and gear grouping in ICES Divisions VIIf-g. Partial information.

COUNTRY	SPECIES	REG_GEA	2003	2004	2005	2006	2007	2008	2009	2010
ENG	PLE	BT2	0	0	0	0	0	1	0	0
	PLE	GN1	0	0	0	3	4	2	3	3
	PLE	GT1	0	0	0	0	0	0	0	0
	PLE	LL1	0	0	0	0	0	0	0	0
	PLE	none	17	9	5	2	0	0	0	0
	PLE	TR1	0	0	0	0	0	0	1	0
	PLE	TR2	1	3	7	29	17	16	7	10
	PLE	Total	18	12	12	34	21	19	11	13
FRA	PLE	GT1	0	0	0	0	0	0	0	0
	PLE	none	0	0	0	0	0	0	0	0
	PLE	Total	0	0	0	0	0	0	0	0
GBG	PLE	GN1	0	0	0	0	0	0	0	0
	PLE	Total	0	0	0	0	0	0	0	0
IRL	PLE	none	0	0	0	0	0	2	0	0
	PLE	Total	0	0	0	0	0	2	0	0
NIR	PLE	TR2	0	0	0	1	0	1	1	0
	PLE	Total	0	0	0	1	0	1	1	0
SCO	PLE	none	0	0	0	0	0	0	0	0
	PLE	Total	0	0	0	0	0	0	0	0

Table 9.7.3. Sole landings from vessels under 10m and gar grouping in ICES Divisions VIIb-k. Partial information.

COUNTRY	SPECIES	REG_GEAR	2003	2004	2005	2006	2007	2008	2009	2010
ENG	SOL	BT2	0	0	7	9	6	7	3	0
	SOL	GN1	7	7	8	22	17	24	19	16
	SOL	GT1	0	0	1	0	0	1	0	0
	SOL	LL1	0	0	0	0	0	1	0	0
	SOL	none	16	9	7	3	2	1	2	1
	SOL	TR1	2	0	0	0	0	0	1	1
	SOL	TR2	9	10	11	47	41	26	17	12
	SOL	Total	34	26	34	81	66	60	42	30
FRA	SOL	BT2	0	3	0	0	0	0	0	1
	SOL	GN1	11	9	10	6	4	1	1	18
	SOL	GT1	23	18	26	23	33	10	10	23
	SOL	LL1	0	0	0	0	0	0	0	0
	SOL	none	4	6	5	2	1	0	0	4
	SOL	TR1	1	0	0	1	0	0	0	0
	SOL	TR2	13	8	8	6	4	1	1	10
	SOL	TR3	0	0	0	0	0	0	0	0
	SOL	Total	52	44	49	38	42	12	12	56
GBG	SOL	GN1	0	0	0	0	0	0	0	0
	SOL	TR2	0	0	0	0	0	1	0	0
	SOL	Total	0	0	0	0	0	1	0	0
GBJ	SOL	TR2	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	0
IRL	SOL	none	5	1	0	0	0	0	1	2
	SOL	Total	5	1	0	0	0	0	1	2
NIR	SOL	TR2	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	0
SCO	SOL	none	0	0	0	0	0	0	0	0
	SOL	TR2	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	0

Table 9.7.4. Sole landings from vessels under 10m and gar grouping in ICES Divisions VIIf-g. Partial information.

COUNTRY	SPECIES	REG_GEA	2003	2004	2005	2006	2007	2008	2009	2010
ENG	SOL	BT2	0	0	0	1	2	5	2	0
	SOL	GN1	0	1	0	3	4	1	1	3
	SOL	GT1	0	0	0	0	0	0	0	0
	SOL	LL1	0	0	0	0	0	0	0	0
	SOL	none	11	5	2	2	0	0	0	0
	SOL	TR1	0	0	0	0	0	0	1	1
	SOL	TR2	3	5	6	25	17	14	7	5
	SOL	Total	14	11	8	31	23	20	11	9
FRA	SOL	GT1	0	0	0	0	0	0	0	1
	SOL	none	0	0	0	0	0	0	0	0
	SOL	TR2	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	1
GBG	SOL	GN1	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	0
IRL	SOL	none	4	0	0	0	0	0	0	0
	SOL	Total	4	0	0	0	0	0	0	0
NIR	SOL	TR2	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	0
SCO	SOL	none	0	0	0	0	0	0	0	0
	SOL	Total	0	0	0	0	0	0	0	0

Table 9.7.5. Cod landings from vessels under 10m and gar grouping in ICES Divisions VIIb-k. Partial information.

COUNTRY	SPECIES	REG_GEAI	2003	2004	2005	2006	2007	2008	2009	2010
ENG	COD	BT2	0	0	0	0	0	0	0	0
	COD	GN1	21	16	11	30	37	20	29	50
	COD	GT1	0	0	0	0	0	0	0	1
	COD	LL1	0	0	0	1	1	2	6	11
	COD	none	14	6	4	2	1	0	1	0
	COD	TR1	0	0	2	0	0	0	0	2
	COD	TR2	5	5	16	24	28	16	13	21
	COD	Total	40	27	33	57	67	38	49	85
FRA	COD	BT2	0	0	0	0	0	0	0	0
	COD	GN1	1	2	0	1	1	0	0	10
	COD	GT1	2	0	1	1	2	1	1	5
	COD	LL1	0	0	0	0	0	0	0	1
	COD	none	0	0	0	0	0	0	0	0
	COD	TR1	0	0	0	0	0	0	0	0
	COD	TR2	0	0	0	0	0	0	0	0
	COD	TR3	0	0	0	0	0	0	0	0
	COD	Total	3	2	1	2	3	1	1	16
GBG	COD	GN1	0	0	0	0	0	0	0	0
	COD	TR2	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0
IRL	COD	none	196	17	19	11	0	1	0	28
	COD	Total	196	17	19	11	0	1	0	28
NIR	COD	TR2	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0
SCO	COD	LL1	0	0	0	0	0	0	0	0
	COD	none	0	0	0	0	0	0	0	0
	COD	TR2	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0

Table 9.7.6. Cod landings from vessels under 10m and gear grouping in ICES Divisions VIIf-g. Partial information.

COUNTRY	SPECIES	REG_GEA	2003	2004	2005	2006	2007	2008	2009	2010
ENG	COD	BT2	0	0	0	0	0	0	0	0
	COD	GN1	0	1	1	6	5	2	3	8
	COD	GT1	0	0	0	0	0	0	0	0
	COD	LL1	0	0	0	0	0	0	0	3
	COD	none	3	0	0	1	1	0	0	0
	COD	TR1	0	0	2	0	0	0	0	0
	COD	TR2	0	1	13	11	7	2	1	3
	COD	Total	3	2	16	18	13	4	4	14
FRA	COD	GT1	0	0	0	0	0	0	0	0
	COD	none	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0
GBG	COD	GN1	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0
IRL	COD	none	60	17	19	9	0	1	0	27
	COD	Total	60	17	19	9	0	1	0	27
NIR	COD	TR2	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0
SCO	COD	none	0	0	0	0	0	0	0	0
	COD	Total	0	0	0	0	0	0	0	0

Since the data are regarded as incomplete, these figures represent minimum estimates of the contribution of under 10m vessels.

9.8. Relative importance of un-regulated and under 10m vessels in overall

The two previous sections suggest that even though the fishing effort for unregulated/undefined gear/mesh-size and under 10 m vessels can sometimes be quite high, the impact of cod appears to be relatively insignificant. This, however, needs to be confirmed when under 10m vessels information is available for all countries involved.

Table 9.8.1. Overview of Cod, Plaice and Sole landings in ICES Divisions VIIb-k. Partial information.

REG_GEA	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010
BT2	COD	0	0	0	0	0	0	0	0
GN1	COD	22	18	11	31	38	20	29	60
GT1	COD	2	0	1	1	2	1	1	6
LL1	COD	0	0	0	1	1	2	6	12
none	COD	210	23	23	13	1	1	1	28
TR1	COD	0	0	2	0	0	0	0	2
TR2	COD	5	5	16	24	28	16	13	21
TR3	COD	0	0	0	0	0	0	0	0
Total u10	COD	239	46	53	70	70	40	50	129
Total O10	COD	4098	2448	2262	2367	2416	2050	2018	2584
Percentage		6%	2%	2%	3%	3%	2%	2%	5%
BT2	PLE	0	2	5	15	4	2	0	3
GN1	PLE	8	12	7	18	16	10	11	20
GT1	PLE	7	8	10	18	16	2	2	17
LL1	PLE	0	0	0	0	0	0	0	0
none	PLE	73	48	33	11	4	5	5	7
TR1	PLE	3	0	0	1	0	0	1	1
TR2	PLE	27	25	25	105	86	77	62	76
TR3	PLE	0	0	0	0	0	0	0	0
Total u10	PLE	118	95	80	168	126	96	81	124
Total O10	PLE	1876	1748	1586	1541	1320	1322	1420	1510
Percentage		6%	5%	5%	11%	10%	7%	6%	8%
BT2	SOL	0	3	7	9	6	7	3	1
GN1	SOL	18	16	18	28	21	25	20	34
GT1	SOL	23	18	27	23	33	11	10	23
LL1	SOL	0	0	0	0	0	1	0	0
none	SOL	25	16	12	5	3	1	3	7
TR1	SOL	3	0	0	1	0	0	1	1
TR2	SOL	22	18	19	53	45	28	18	22
TR3	SOL	0	0	0	0	0	0	0	0
Total u10	SOL	91	71	83	119	108	73	55	88
Total O10	SOL	2084	1953	2193	1956	1969	1662	1588	1675
Percentage		4%	4%	4%	6%	5%	4%	3%	5%

Table 9.8.2. Overview of Cod, Plaice and Sole landings in ICES Divisions VIIf-g. Partial information.

REG_GEAI	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010
BT2	COD	0	0	0	0	0	0	0	0
GN1	COD	0	1	1	6	5	2	3	8
GT1	COD	0	0	0	0	0	0	0	0
LL1	COD	0	0	0	0	0	0	0	3
none	COD	63	17	19	10	1	1	0	27
TR1	COD	0	0	2	0	0	0	0	0
TR2	COD	0	1	13	11	7	2	1	3
Total u10	COD	63	19	35	27	13	5	4	41
Total O10	COD	2785	1768	1582	1583	1517	1226	1197	1575
Percentage		2%	1%	2%	2%	1%	0%	0%	3%
BT2	PLE	0	0	0	0	0	1	0	0
GN1	PLE	0	0	0	3	4	2	3	3
GT1	PLE	0	0	0	0	0	0	0	0
LL1	PLE	0	0	0	0	0	0	0	0
none	PLE	17	9	5	2	0	2	0	0
TR1	PLE	0	0	0	0	0	0	1	0
TR2	PLE	1	3	7	30	17	17	8	10
Total u10	PLE	18	12	12	35	21	22	12	13
Total O10	PLE	507	430	335	329	352	367	403	388
Percentage		4%	3%	4%	11%	6%	6%	3%	3%
BT2	SOL	0	0	0	1	2	5	2	0
GN1	SOL	0	1	0	3	4	1	1	3
GT1	SOL	0	0	0	0	0	0	0	1
LL1	SOL	0	0	0	0	0	0	0	0
none	SOL	15	5	2	2	0	0	0	0
TR1	SOL	0	0	0	0	0	0	1	1
TR2	SOL	3	5	6	25	17	14	7	5
Total u10	SOL	18	11	8	31	23	20	11	10
Total O10	SOL	1130	1067	944	846	879	721	758	844
Percentage		2%	1%	1%	4%	3%	3%	1%	1%

9.9. *Celtic Sea spatial presentations*

Figure 9.9.1. below shows the fishing effort (in hours fished) by ICES rectangle for 2003-2008 for the main gear grouping.

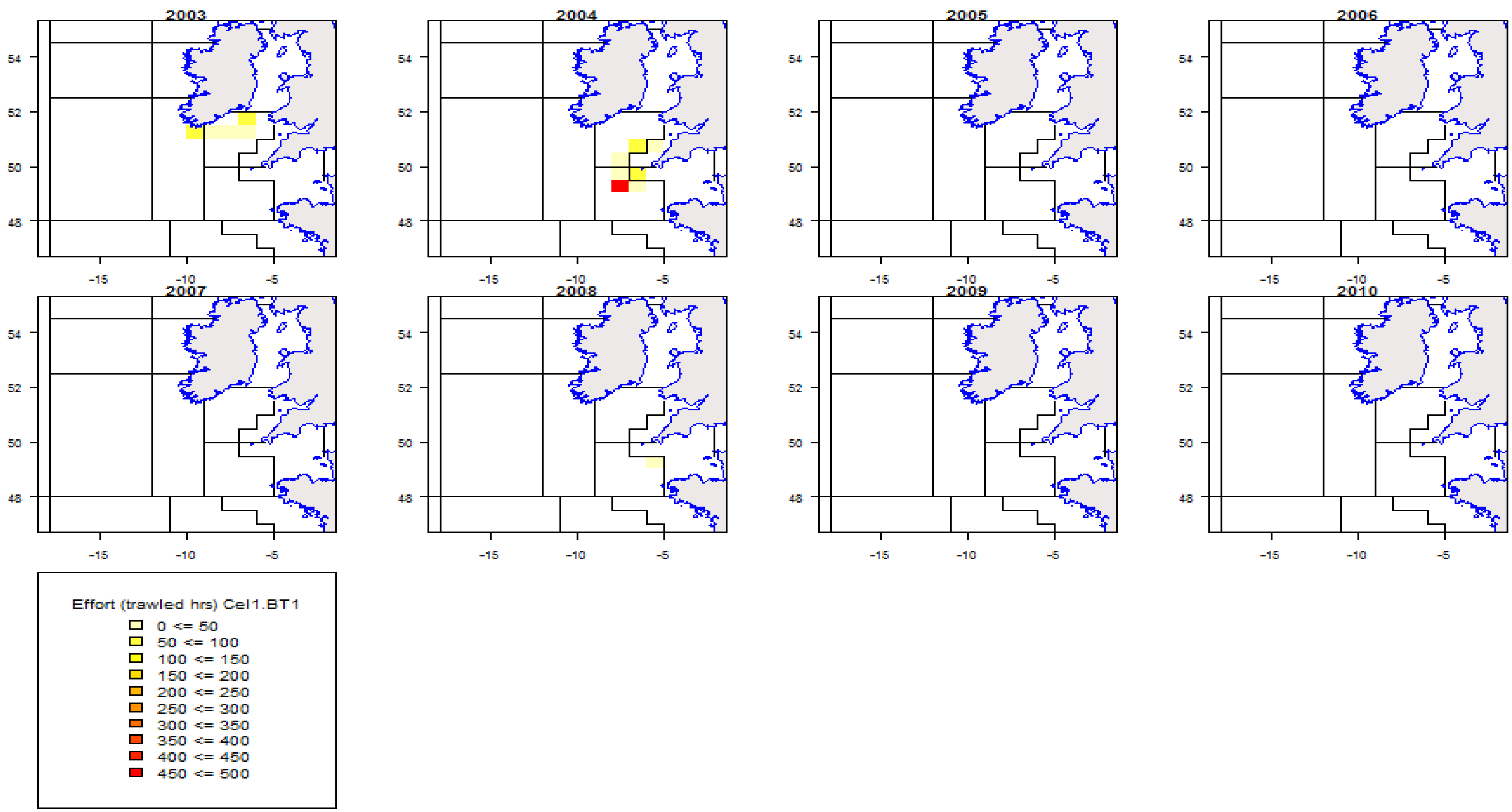


Figure 9.9.1. Fishing effort (in hours fished) by ICES rectangle for 2003-2010 for the main gear grouping BT1.

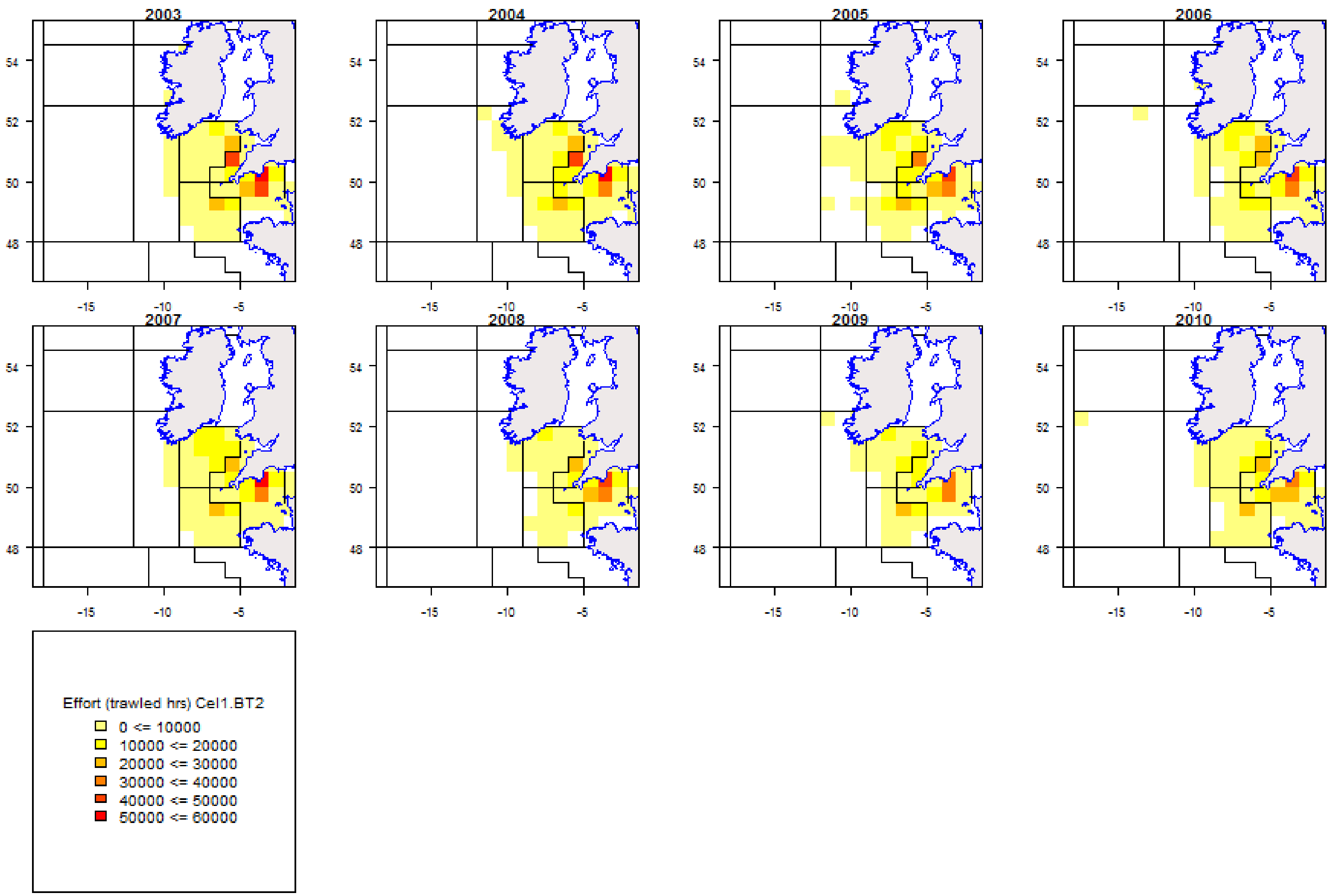


Figure 9.9.1. continued for BT2.

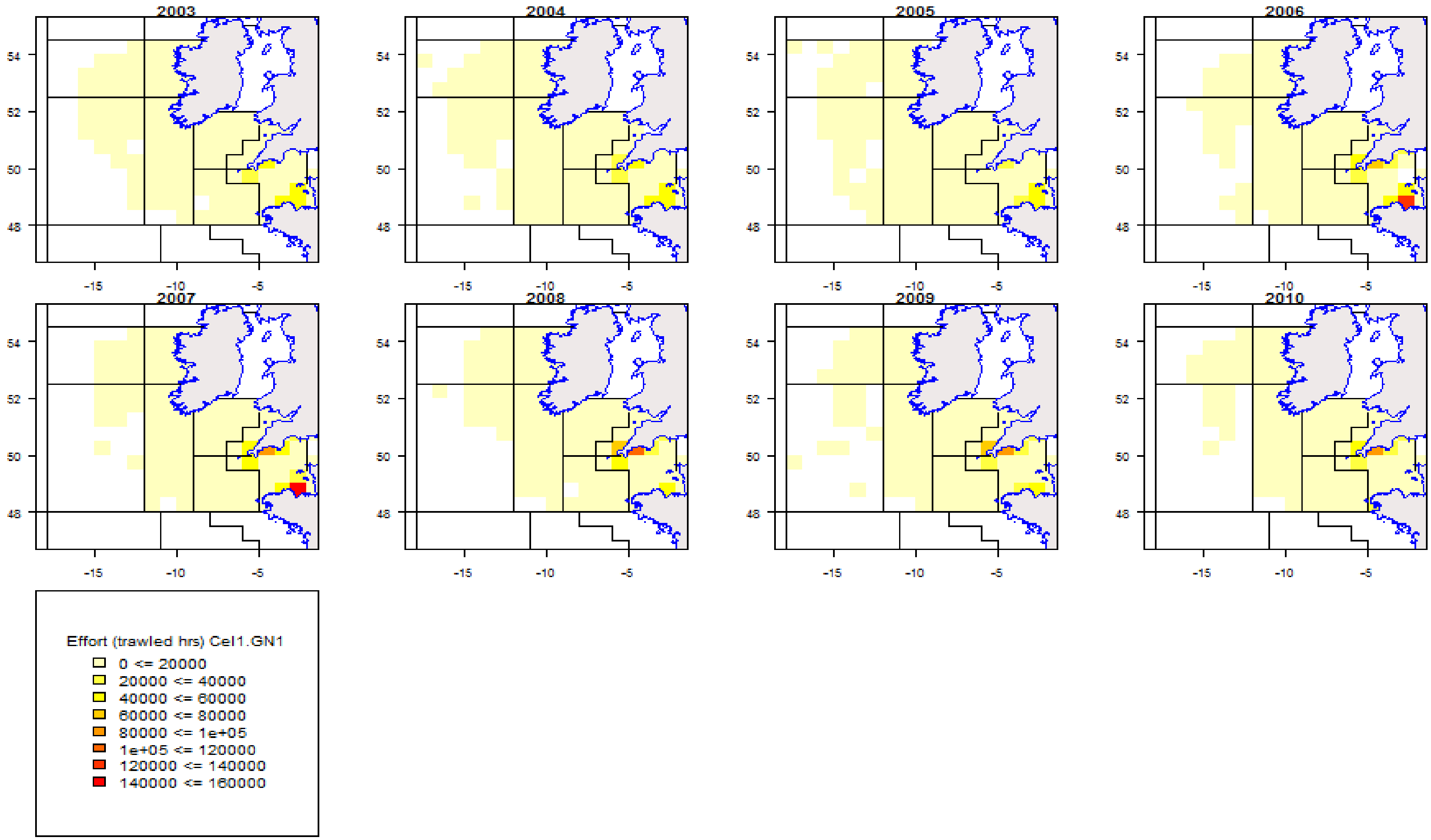


Figure 9.9.1. continued for GN1.

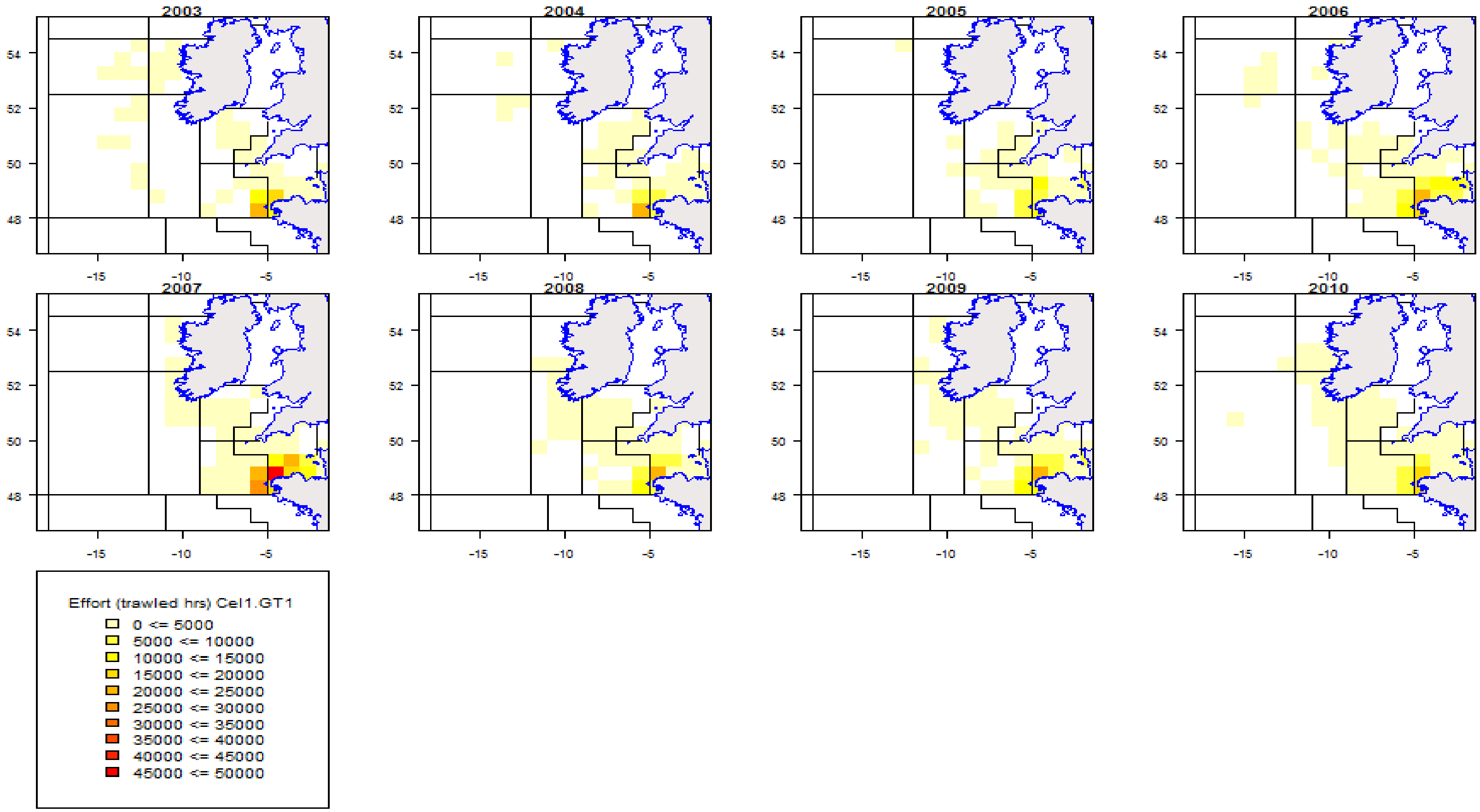


Figure 9.9.1. continued for gear GT1.

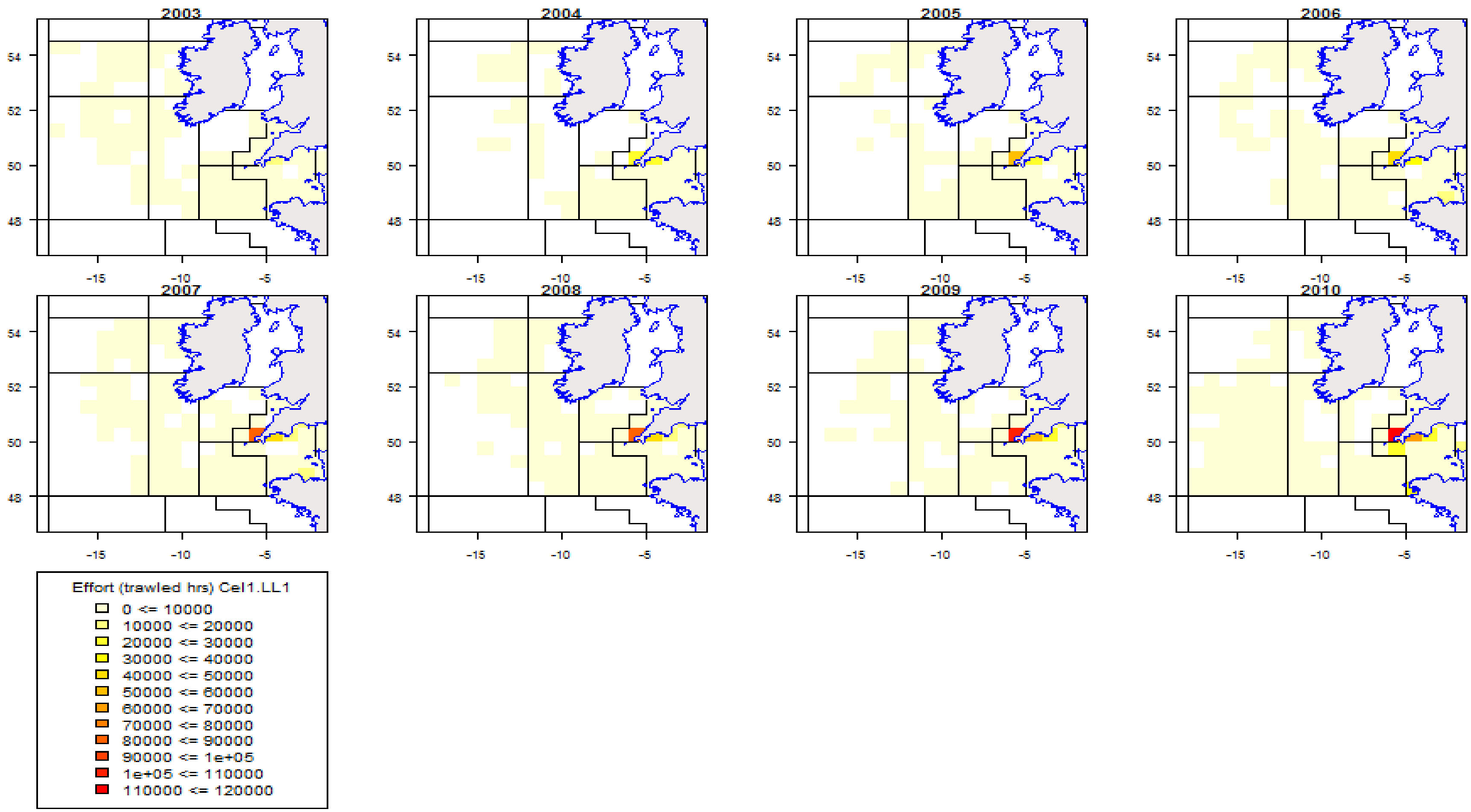


Figure 9.9.1. continued for LL1.

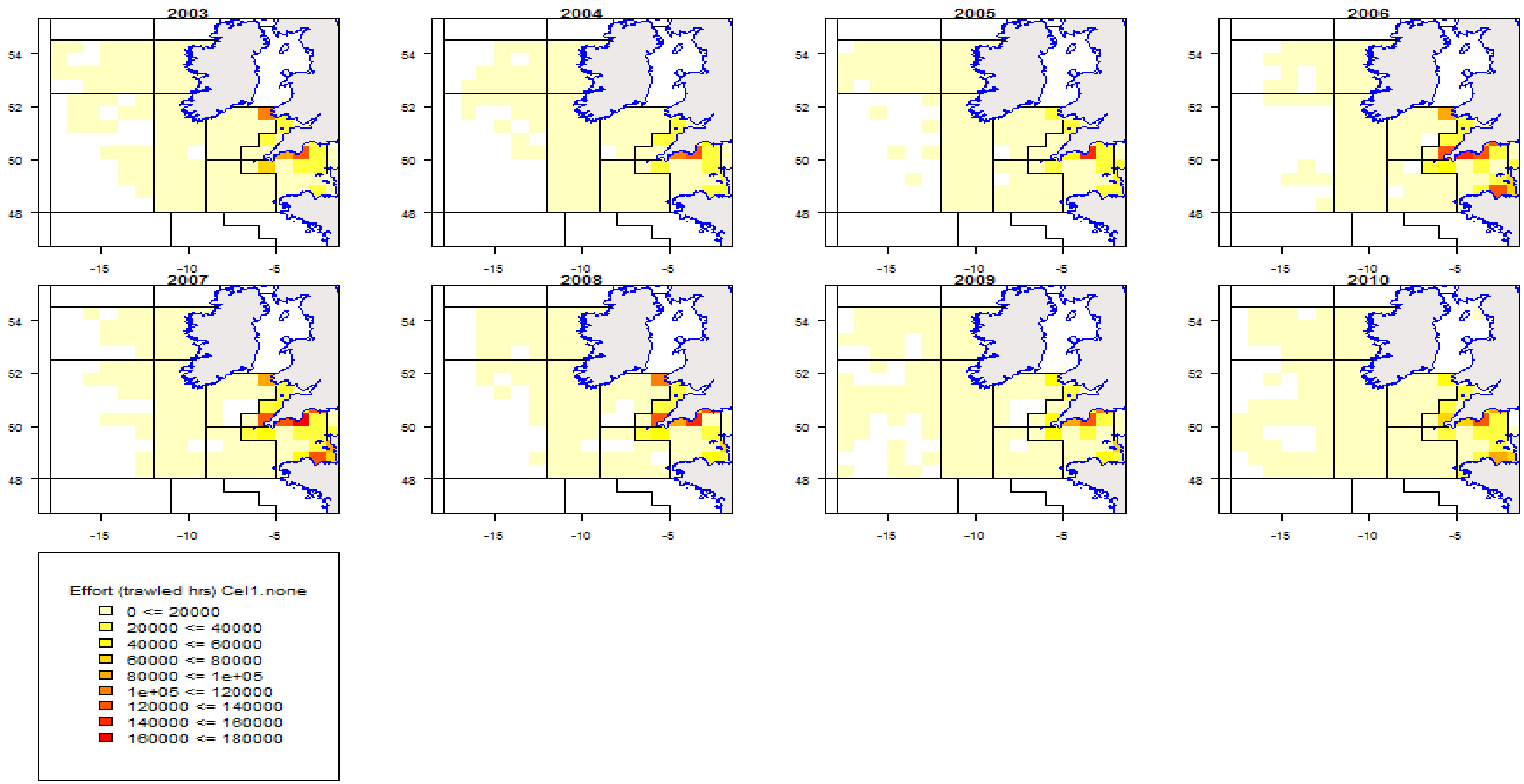


Figure 9.9.1. continued for 'none'.

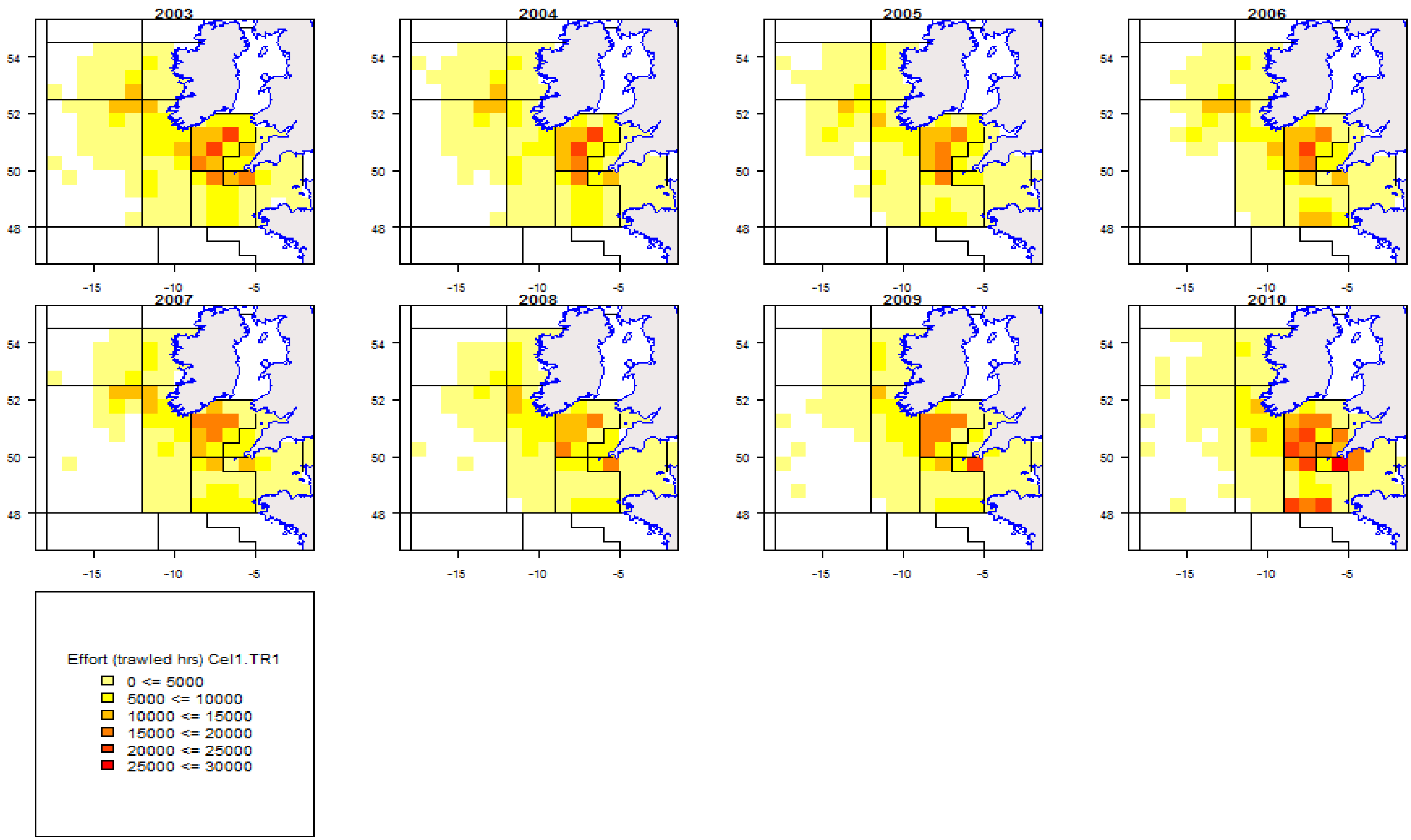


Figure 9.9.1. continued for TR1.

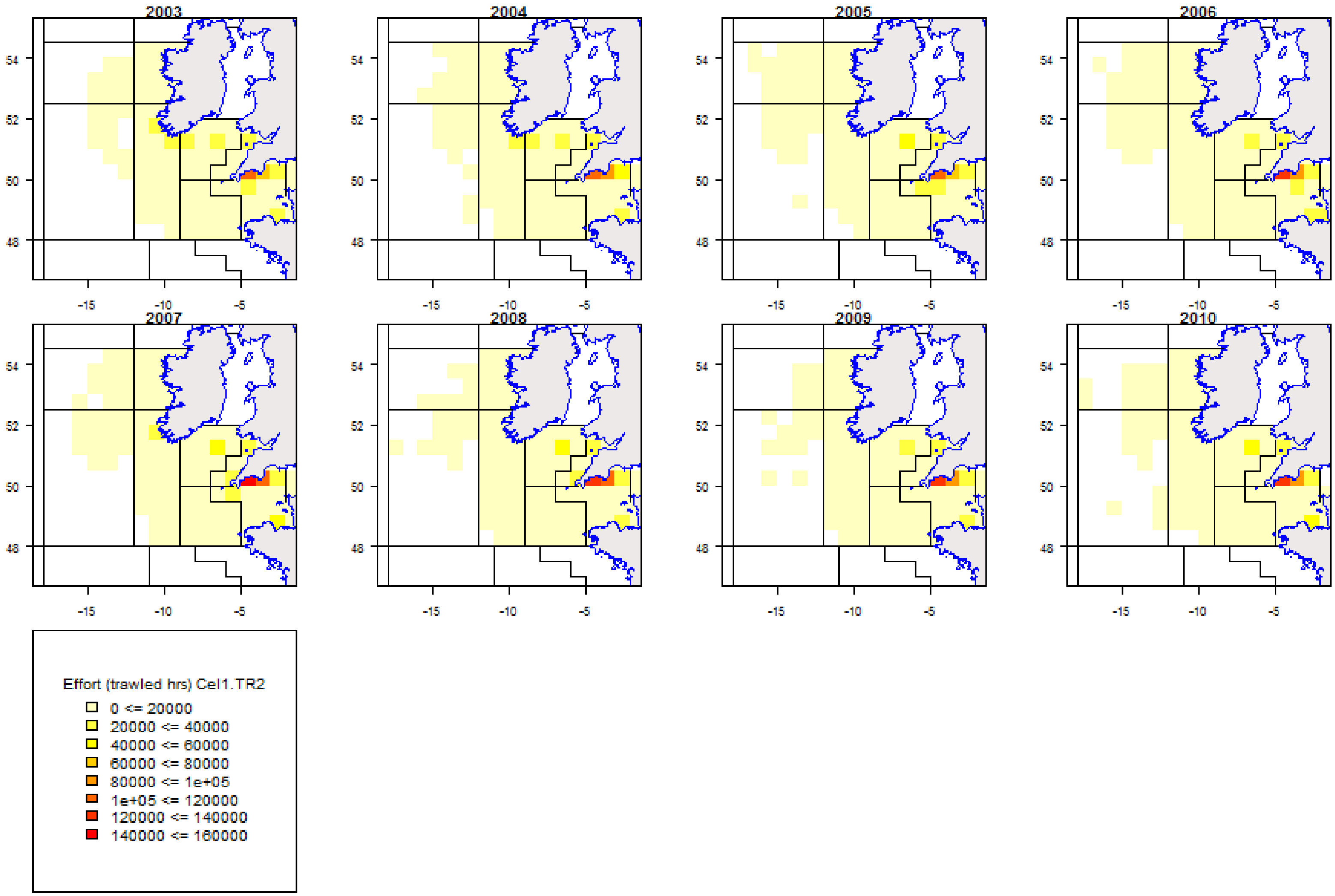


Figure 9.9.1. continued for TR2.

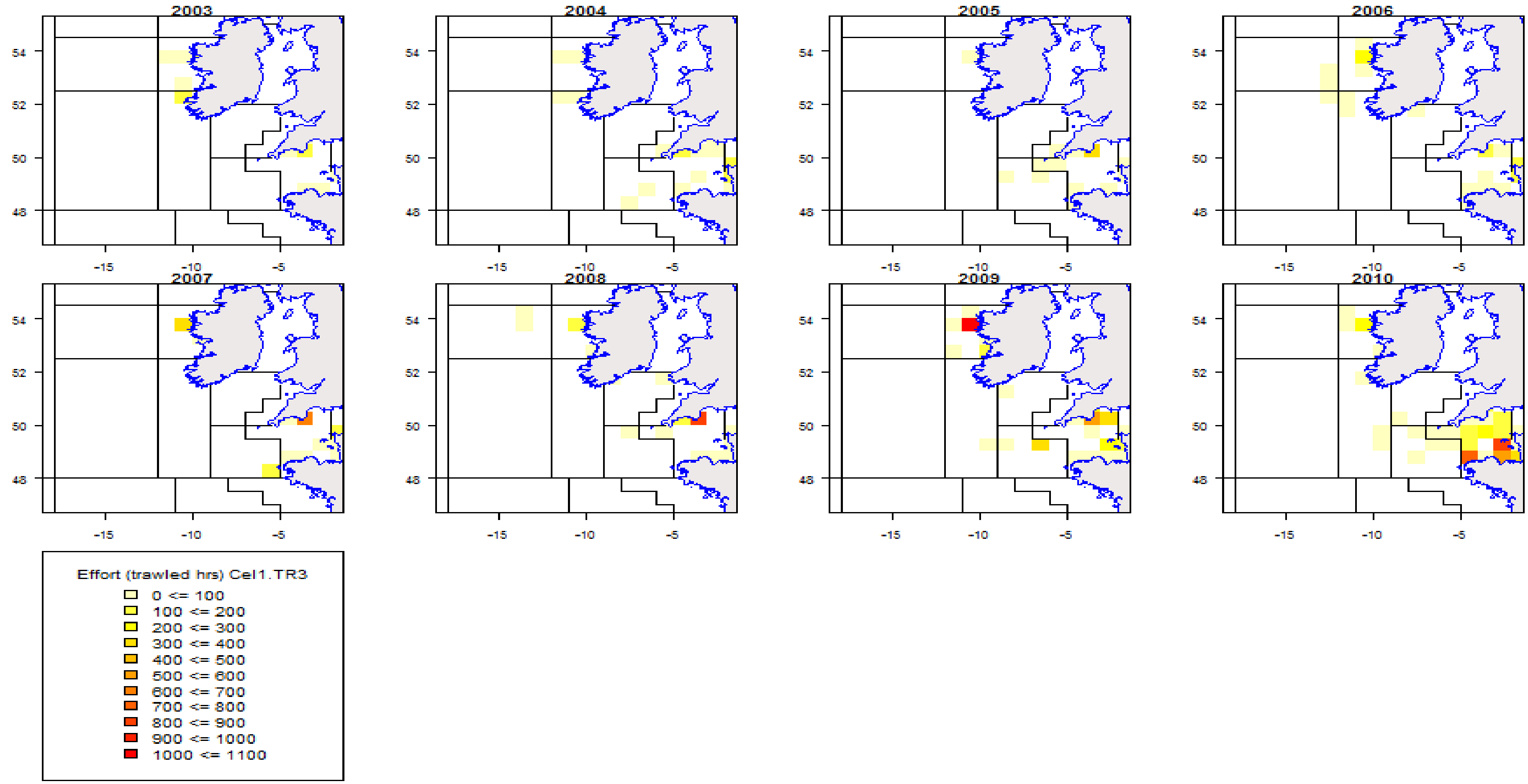


Figure 9.9.1. continued for TR2

9.10. Conclusion

In order to manage the Celtic Sea Cod stock using a scheme involving limits on effort, the limitations should be concentrated where their impact provides maximum benefit. In the light of this, ICES Divisions VIIbc is not considered since the Celtic Sea Cod stock covers Divisions VIIe-k only.

Given the importance of the Divisions VIIfg in term of cod catches, and the somewhat higher LPUE in that area, a concentration of the regulation in that area may be beneficial. However, the group was not able to consider other relevant data such as the distributions of spawning fish or whether parts of the wider Celtic Sea are important for juveniles. Observations of these factors would help to confirm whether or not management concentrated on a subset of the overall area would provide the necessary protection for the stock as a whole. It is likely that limitation of effort specific to the VIIfg area would benefit to the cod stock, and also to other species, even though there will be some shift of effort to adjacent areas, given the differences in LPUE.

It is important to note that, as for other areas covered by Annex IIa, some mesh size categories group together several fishing activities which in fact target different species. Therefore, the correspondence between the métier and the gear/mesh-size category may be not straightforward since the impact on cod may be very different. For instance, the *Nephrops* métier in the Celtic Sea may be part of mesh-size category TR2 for Irish vessels, while for France this métier is mostly represented within mesh-size category TR1.

The analysis of the French fishery presented previously (STECF, 2008) showed that limiting fishing effort for a vessel targeting the benthic species (anglerfish, megrim) may have practically no effect on the cod stock. However, this metier contributes significantly to the total fishing effort of the otter trawl in the Celtic Sea.

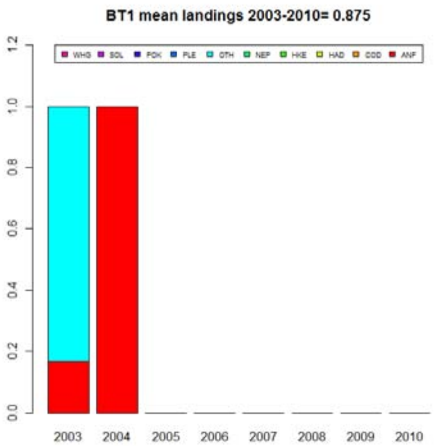
The definition of the 'effort groups' should take account of these métiers. This should help to maximize the impact of the regulated measures, while preventing unnecessary restrictions in métiers not contributing much to mortality of cod.

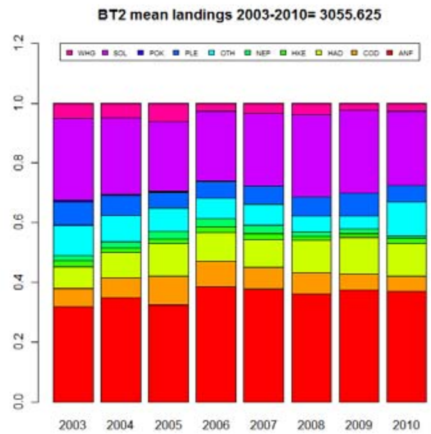
Given that the number of vessels may have increased, a first regulating measure could be to limit the access of the area.

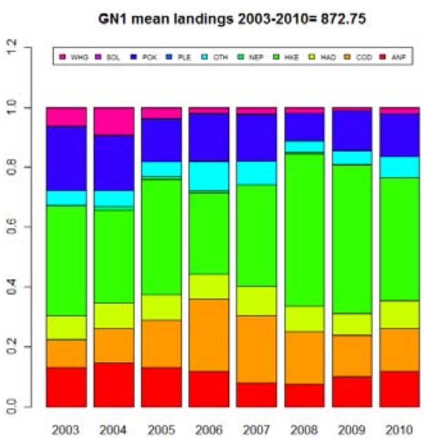
9.11. Specific TORs "Concerning effort, CPUE/LPUE and catch data in the Celtic Sea:

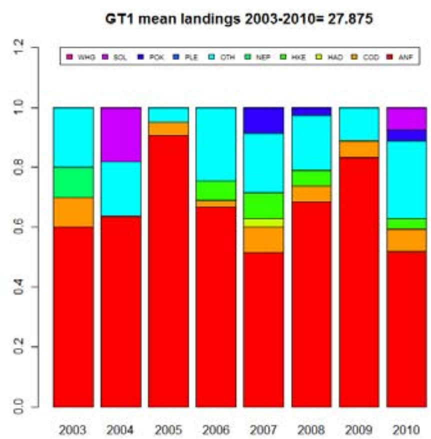
(i) For VIIf+VIIg only, identify the **main species** (volume and percentage) caught per gear category, and related trends in recent years. Specify when this calculation has taken account of discards as well."

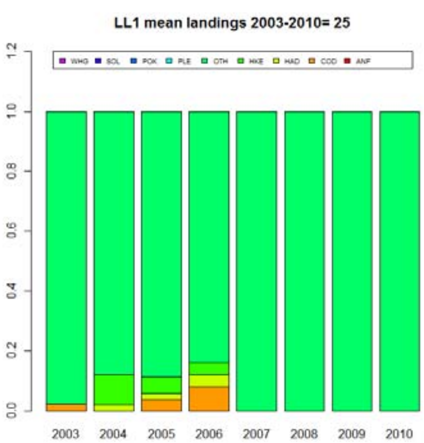
(i) The main species (in volume) were identified in the report (Tables 9.3.1.1a-l). The next figures show the relative percentage (in volume, not taking into account the discards) of each species in the total catches. A group ("OTH") merging all the "other" species not described in the report has been added to take into account the whole landings. The trends for the main gear grouping (TR1 and BT2) are quite stable. The other gear groupings appear to be more erratic but the level of effort of these gear grouping detailed are not significant compared to the main gear groupings.

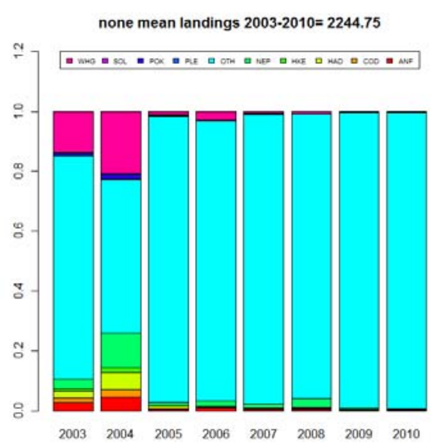

BT1 mean landings 2003-2010= 0.875
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010

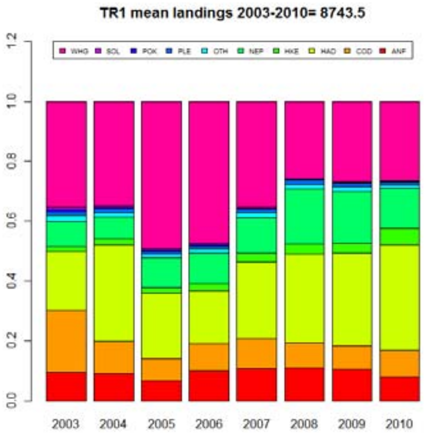

BT2 mean landings 2003-2010= 3055.625
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010

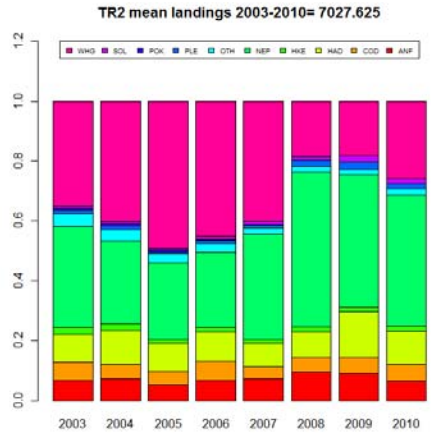

GN1 mean landings 2003-2010= 872.75
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010

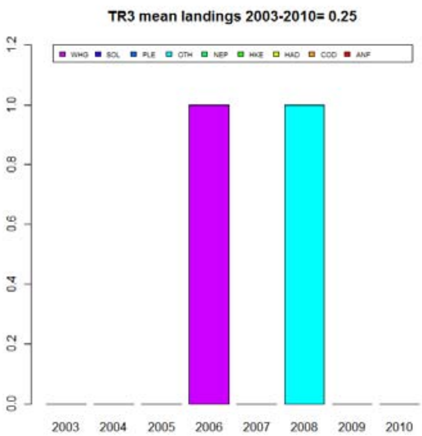

GT1 mean landings 2003-2010= 27.875
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010


LL1 mean landings 2003-2010= 25
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010


none mean landings 2003-2010= 2244.75
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010


TR1 mean landings 2003-2010= 8743.5
WHG SOL POK PLE OTH NEP HKE HAD COD ANF
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010


TR2 mean landings 2003-2010= 7027.625
WHG SOL POK PLE OTH NEP HKE HAD COD ANF
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010


TR3 mean landings 2003-2010= 0.25
WHG SOL PLE OTH NEP HKE HAD COD ANF
0.0 0.2 0.4 0.6 0.8 1.0 1.2
2003 2004 2005 2006 2007 2008 2009 2010

10. REVIEW OF FISHING EFFORT DEPLOYED IN THE CONTEXT OF A MULTIANNUAL PLAN OF SOLE IN THE BAY OF BISCAY (R(EC)NO 388/2006)

10.1. General considerations regarding the derogations and special conditions

STECF-EWG-11-11 notes that assignment of derogations and special conditions is based on best expert knowledge. Data errors may exist regarding the huge data bases and the special knowledge required dealing with them (grouping and exact formulation of data queries).

STECF-EWG-11-11 noted that for the first year, countries submitted data broken down by gear (as laid down in Annex IV of Commission Decision 2008/949/CE) for regulated and non-regulated vessels (as laid down in the plan applying to the Bay of Biscay, article 5 of R(EC) No 388/2006). However, when submitted, the split up of these data according the above was only for 2010. As a first attempt to provide information on the fisheries and metiers, currently affected by the multiannual plan in the Bay of Biscay, STECF-EWG-11-11 decided to tabulate the information available for all the gear categories involved and all major species.

10.2. Trend in effort 2000-2010 by derogation and by Member State

Catch and effort data have been provided by all Member States except Spain.

Spanish data provided the previous years are now under revision, effort and catch time series need to be reconsidered before further complete analysis of the activity in this area.

All analyses were made this year without Spanish data.

Apart from the Belgium beam trawl fleet, only operational in quarter 3, almost all effort from all gears is French. The French otter trawl fleet being by far the dominating fleet with percentages around 60% of the effort deployed in the last 8 years (Table 10.2.1 and Figure 10.2.1). The other fleets involved are the French trammel nets with increasing trends from about 4% in 2000 up to 15% in the last three years. The predominantly French Pelagic trawl effort went down from about 40% in the beginning of the series to around 5% in the last few years. The Belgian beam trawl fleet accounts only for about 4% of the effort.

As data problems were discovered with the French effort information for 2002, STECF-EWG-11-11 decided only to provide effort trends graphically starting from 2003.

Information on GT*days at sea and the number of vessels active in 8ab are not presented in this report but are available on the JRC website:

https://stecf.jrc.ec.europa.eu/meetings/2011?p_p_id=62_INSTANCE_9gxN&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1&_62_INSTANCE_9gxN_struts_action=%2Fjournal_articles%2Fview&_62_INSTANCE_9gxN_groupId=43805&_62_INSTANCE_9gxN_articleId=88491&_62_INSTANCE_9gxN_version=1.0

Information on the nominal effort of the specific condition SBCIIIART5 is given in Table 10.2.3. As mentioned above, data broken down following this specific condition were only provided for 2010, introducing a shift for the main gear type from the “none” category to the SPECON “SBCIIIART5”.

The otter trawl fleet increased since 2003 with a maximum effort level in 2007 that was nearly doubled compared to 2003. Since 2007 the effort deployed stayed at that level.The second important fleet in 2003 (pelagic trawl) decreased since 2006 from around 20% to about 5% following a large decommissioning due to the anchovy crisis.

Trammel nets effort in 2005 doubled compared to earlier years and has fluctuated around that level.

Gillnets increased from 2003 to 2006 and decreased since then.

As a quality check, STECF routinely compares the data currently submitted with the data submitted during the previous year, as is displayed in table 10.2.2. Compared to the data submitted in 2010, Belgium has (sometimes significantly) re-evaluated downwards its figures by correcting for some original duplication of some records. No differences appear between the two data sets for the other countries.

Table 10.2.1 – Bay of Biscay - Trend in nominal effort (kW*days at sea) by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2000-2010. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 5 of the report.

REG_A	REG GEAR COD	SPECON	COUNT	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BoB	BEAM	none	BEL	913195	820583	771813	618667	656093	836309	942990	980041	776015	924272	
BoB		none	ENG									880		
BoB		none	FRA				15860	26032	35522	4104	438			110
BoB		none	NED		934808									
BoB	**Total**	**none**		**913195**	**2E+06**	**771813**	**634527**	**682125**	**871831**	**947094**	**980479**	**776895**	**924272**	**110**
BoB	BEAM	SBCIIIART5	BEL											902937
BoB	**Total**	**SBCIIIART5**												**902937**
BoB	DEM_SEINE	none	FRA											347967
BoB		none	NED										12776	8936
BoB	**Total**	**none**											**12776**	**356903**
BoB	DREDGE	none	ENG		4183									
BoB		none	FRA	260467	331896	1E+06	397865	421943	472463	598415	504995	411002	399497	81212
BoB		none	IRL				14754							
BoB		none	SCO		25124									
BoB	**Total**	**none**		**260467**	**361203**	**1E+06**	**412619**	**421943**	**472463**	**598415**	**504995**	**411002**	**399497**	**81212**
BoB	DREDGE	SBCIIIART5	FRA											20838
BoB	**Total**	**SBCIIIART5**												**20838**
BoB	GILL	none	ENG			2730		48409	35499	161852	54377	18347	42007	60023
BoB		none	FRA	1E+06	1E+06	6E+06	2E+06	1815567	3345574	3826232	2994200	2834696	2809728	2E+06
BoB		none	SCO				7163	62035	78826	33150	54702	96598	29681	54375
BoB	**Total**	**none**		**1E+06**	**1E+06**	**6E+06**	**2E+06**	**1926011**	**3459899**	**4021234**	**3103279**	**2949641**	**2881416**	**2E+06**
BoB	GILL	SBCIIIART5	FRA											622394
BoB	**Total**	**SBCIIIART5**												**622394**
BoB	LONGLINE	none	ENG	6716	17364	57670	84319	110156	71646	66968	54601	20237		
BoB		none	FRA	88254	176129	891975	235133	300458	601160	916800	858475	740526	740526	846564
BoB		none	IRL						842	2105	1263			
BoB		none	SCO		3001					6797	1378	22160		9337
BoB	**Total**	**none**		**94970**	**196494**	**949645**	**319452**	**410614**	**673648**	**992670**	**915717**	**782923**	**740526**	**855901**
BoB	LONGLINE	SBCIIIART5	FRA											86345
BoB	**Total**	**SBCIIIART5**												**86345**
BoB	OTTER	none	DEN	21694							11850		58516	
BoB		none	ENG	13041	94	2855	67484	129094	78252	104436			7920	3240
BoB		none	FRA	5E+06	8E+06	4E+07	1E+07	13058268	18462096	22354632	24659530	20854560	20727711	6E+06
BoB		none	IRL		242	11050		985		4854				
BoB		none	NIR										1624	
BoB		none	SCO			4634								
BoB	**Total**	**none**		**5E+06**	**8E+06**	**4E+07**	**1E+07**	**13188347**	**18540348**	**22463922**	**24671380**	**20854560**	**20795771**	**6E+06**
BoB	OTTER	SBCIIIART5	FRA											6E+06
BoB	**Total**	**SBCIIIART5**												**6E+06**
BoB	PEL_SEINE	none	FRA	131568	449004	2E+06	466646	540507	568973	756785	745857	770304	769989	551439
BoB	**Total**	**none**		**131568**	**449004**	**2E+06**	**466646**	**540507**	**568973**	**756785**	**745857**	**770304**	**769989**	**551439**
BoB	PEL_SEINE	SBCIIIART5	FRA											690
BoB	**Total**	**SBCIIIART5**												**690**
BoB	PEL_TRAWL	none	DEN	86110	26710					38027	174671	141787	179083	29240
BoB		none	ENG	89855	68867	275666	166043	207062	127741	92445	36288	155677	217305	44490
BoB		none	FRA	3E+06	2E+06	1E+07	3E+06	1135975	3148397	4076421	3124058	888396	828481	1E+06
BoB		none	GER	246685	323841	191411	30222	122593	263370	181553		85325	20800	41237
BoB		none	IRL	320050	100508	142989	136414	302436	212290	99746	67199	20000	4028	17500
BoB		none	NED	2E+06	3E+06	1E+06	655575	114007	512294	460863	94666	378758	166742	99986
BoB		none	NIR										541	
BoB		none	SCO	14662			3972						19496	
BoB	**Total**	**none**		**6E+06**	**6E+06**	**2E+07**	**4E+06**	**1882073**	**4264092**	**4949055**	**3496882**	**1669943**	**1436476**	**1E+06**
BoB	PEL_TRAWL	SBCIIIART5	FRA											98747
BoB	**Total**	**SBCIIIART5**												**98747**
BoB	POTS		ENG					10185						
BoB			FRA	229712	161728	618764	229673	347756	176851	187550	164883	24911	24911	566618
BoB			GER				14112	21168		13631	11500	7056		
BoB	**Total**			**229712**	**161728**	**618764**	**243785**	**379109**	**176851**	**201181**	**176383**	**31967**	**24911**	**566618**
BoB	POTS	SBCIIIART5	FRA											34020
BoB	**Total**	**SBCIIIART5**												**34020**
BoB	TRAMMEL		ENG									547		
BoB			FRA	506847	741206	4E+06	1E+06	1589582	3558877	5004728	5255173	4869305	4867175	427619
BoB	**Total**			**506847**	**741206**	**4E+06**	**1E+06**	**1589582**	**3558877**	**5004728**	**5255173**	**4869852**	**4867175**	**427619**
BoB	TRAMMEL	SBCIIIART5	FRA											3E+06
BoB	**Total**	**SBCIIIART5**												**3E+06**
BoB	none		FRA	152647	214786	1E+06	183430	179275	191342	348466	278666	449815	449815	
BoB			IRL						25000					
BoB	**Total**			**152647**	**214786**	**1E+06**	**183430**	**179275**	**216342**	**348466**	**278666**	**449815**	**449815**	
BoB														
BoB	**Grand Total**			**1E+07**	**2E+07**	**7E+07**	**2E+07**	**21199586**	**32803324**	**40283550**	**40128811**	**33566902**	**33302624**	**2E+07**

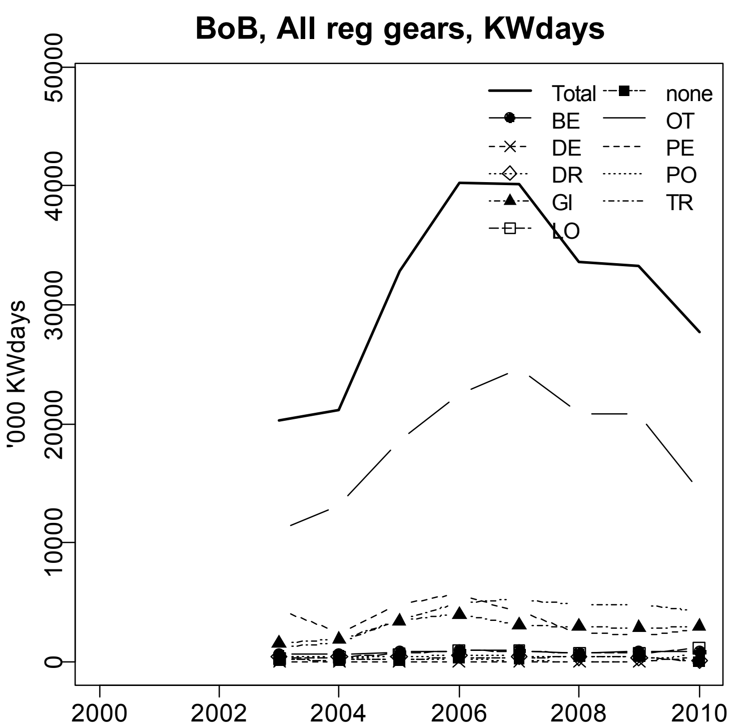
Table 10.2.2 – Bay of Biscay – Percentage difference in effort (kW*days at sea) by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2009 between the data provided in 2010 and 2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in section 5.

REG AREA COD	REG GEAR COD	COUNTRY	2004	2005	2006	2007	2008	2009
BoB	BEAM	BEL	0%	-31%	0%	0%	0%	-21%
BoB	BEAM	ENG	0%	0%	0%	0%	0%	0%
BoB	BEAM	FRA	0%	0%	0%	0%	0%	0%
BoB	BEAM	NED	0%	0%	0%	0%	0%	0%
BoB	DEM_SEINE	NED	0%	0%	0%	0%	0%	0%
BoB	DREDGE	ENG	0%	0%	0%	0%	0%	0%
BoB	DREDGE	FRA	0%	0%	0%	0%	0%	0%
BoB	DREDGE	IRL	0%	0%	0%	0%	0%	0%
BoB	DREDGE	SCO	0%	0%	0%	0%	0%	0%
BoB	GILL	ENG	0%	0%	0%	0%	0%	0%
BoB	GILL	FRA	0%	0%	0%	0%	0%	0%
BoB	GILL	SCO	0%	0%	0%	0%	0%	0%
BoB	LONGLINE	ENG	0%	0%	0%	0%	0%	0%
BoB	LONGLINE	FRA	0%	0%	0%	0%	0%	0%
BoB	LONGLINE	IRL	0%	0%	0%	0%	0%	0%
BoB	LONGLINE	SCO	0%	0%	0%	0%	0%	0%
BoB	none	FRA	0%	0%	0%	0%	0%	0%
BoB	none	IRL	0%	0%	0%	0%	0%	0%
BoB	OTTER	DEN	0%	0%	0%	0%	0%	0%
BoB	OTTER	ENG	0%	0%	0%	0%	0%	0%
BoB	OTTER	FRA	0%	0%	0%	0%	0%	0%
BoB	OTTER	IRL	0%	0%	0%	0%	0%	0%
BoB	OTTER	NIR	0%	0%	0%	0%	0%	0%
BoB	OTTER	SCO	0%	0%	0%	0%	0%	0%
BoB	PEL_SEINE	FRA	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	DEN	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	ENG	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	FRA	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	GER	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	IRL	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	NED	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	NIR	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	SCO	0%	0%	0%	0%	0%	0%
BoB	POTS	ENG	0%	0%	0%	0%	0%	0%
BoB	POTS	FRA	0%	0%	0%	0%	0%	0%
BoB	POTS	GER	0%	0%	0%	0%	0%	0%
BoB	TRAMMEL	ENG	0%	0%	0%	0%	0%	0%
BoB	TRAMMEL	FRA	0%	0%	0%	0%	0%	0%

Last year, the group presented the trends in nominal effort (KW*days at sea), however, in 2010, the SPECON was introduced, but only for 2010 making this table unreliable for trends analysis including the year 2010.

Table 10.2.3 – Bay of Biscay - Trend in nominal effort (kW*days at sea) by derogations stated in article 5 of Coun. Reg. 388/2006, 2000-10. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.

REG AREA COD	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BoB	BEAM	none	913195	1755391	771813	634527	682125	871831	947094	980479	776895	924272	110
BoB	BEAM	SBCIIIART5											902937
BoB	DEM_SEINE	none										12776	356903
BoB	DREDGE	none	260467	361203	1352166	412619	421943	472463	598415	504995	411002	399497	81212
BoB	DREDGE	SBCIIIART5											20838
BoB	GILL	none	1072873	1440398	5841338	1614796	1926011	3459899	4021234	3103279	2949641	2881416	2036258
BoB	GILL	SBCIIIART5											622394
BoB	LONGLINE	none	94970	196494	949645	319452	410614	673648	992670	915717	782923	740526	855901
BoB	LONGLINE	SBCIIIART5											86345
BoB	none	none	152647	214786	1027994	183430	179275	216342	348466	278666	449815	449815	
BoB	OTTER	none	4797484	7971285	38325323	11071154	13188347	18540348	22463922	24671380	20854560	20795771	6043923
BoB	OTTER	SBCIIIART5											5924548
BoB	PEL_SEINE	none	131568	449004	2026613	466646	540507	568973	756785	745857	770304	769989	551439
BoB	PEL_SEINE	SBCIIIART5											690
BoB	PEL_TRAWL	none	5988738	6397641	16447167	4027968	1882073	4264092	4949055	3496882	1669943	1436476	1460438
BoB	PEL_TRAWL	SBCIIIART5											98747
BoB	POTS	none	229712	161728	618764	243785	379109	176851	201181	176383	31967	24911	566618
BoB	POTS	SBCIIIART5											34020
BoB	TRAMMEL	none	506847	741206	3600220	1277751	1589582	3558877	5004728	5255173	4869852	4867175	427619
BoB	TRAMMEL	SBCIIIART5											3349104
Sum			**14148501**	**19689136**	**70961043**	**20252128**	**21199586**	**32803324**	**40283550**	**40128811**	**33566902**	**33302624**	**23420044**



Figures 10.2.1 – Bay of Biscay -Trend in nominal effort (kW*days at sea) by derogations stated in article 5 of Coun. Reg. 388/2006, 2003-2010. Derogations are sorted by gear and summed by special condition (SPECON SBDIIIART5 and none). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1.

10.3. Trend in catch estimates 2003-2010 by derogation the Bay of Biscay

Although the data available for the review comes from all countries involved in the fisheries, except for Spain, there is little information on discards for most of the species. Only very sparse discard information is available from Belgium for 2009 and 2010 and France for 2010. The lack of discard information increases the likelihood of incorrect assumptions on total removals for that species.

Even if the discard information provided to the group improved this year, because of the limited availability and reliability of discard information for some species and from some countries, care is required in the use of these data to draw firm conclusions about catch composition. In addition, the procedure used to raise discards and explained in section 5.2.5 may not be fully consistent with the procedures used in other contexts and therefore may not be directly comparable.

The following Table 10.3.1 lists the landings, discards and discard rates for the main species by derogations.

For brevity, the following sections represent the landings and discards by derogation in weight for a subset of the species caught ie. anglerfish (ANF), hake, (HKE), *Nephrops* (NEP), sole (SOL), and whiting (WHG). However, additional data queries for other species can be made depending on data provisions of the national catches by the experts or national institutes. The data given in the table form the basis of Figure 10.3.1 displaying the relative catch compositions by derogations for the years 2003-2010. The lack of the dark bars representing discards also indicates lack of observations rather than low discard numbers.

Figure 10.3.1 shows that in the trammel fishery, landings of sole have substantially increased in the last 6 years. Landings of hake seem to have fluctuated for gillnet and increased for otter.

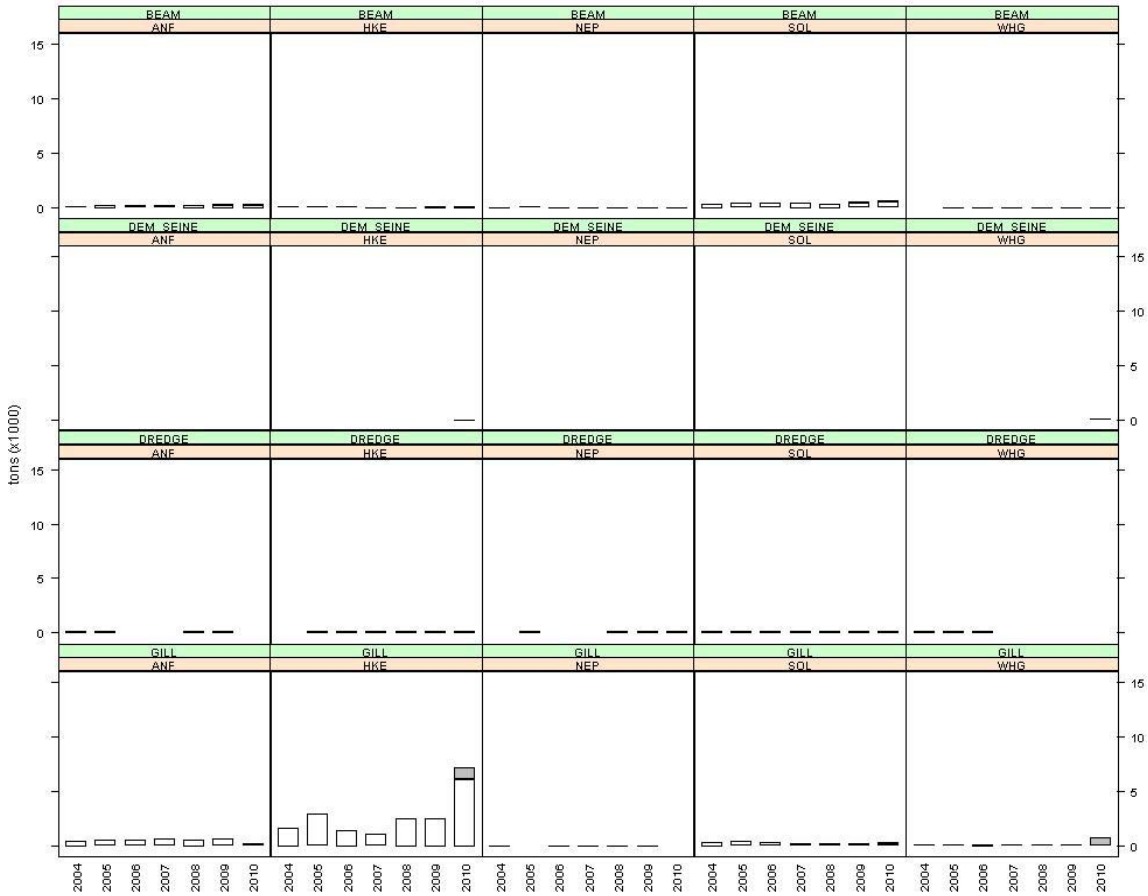


Fig. 10.3.1 – Bay of Biscay - Landings (t) and discard (t) by derogation and species, 2003-2010 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

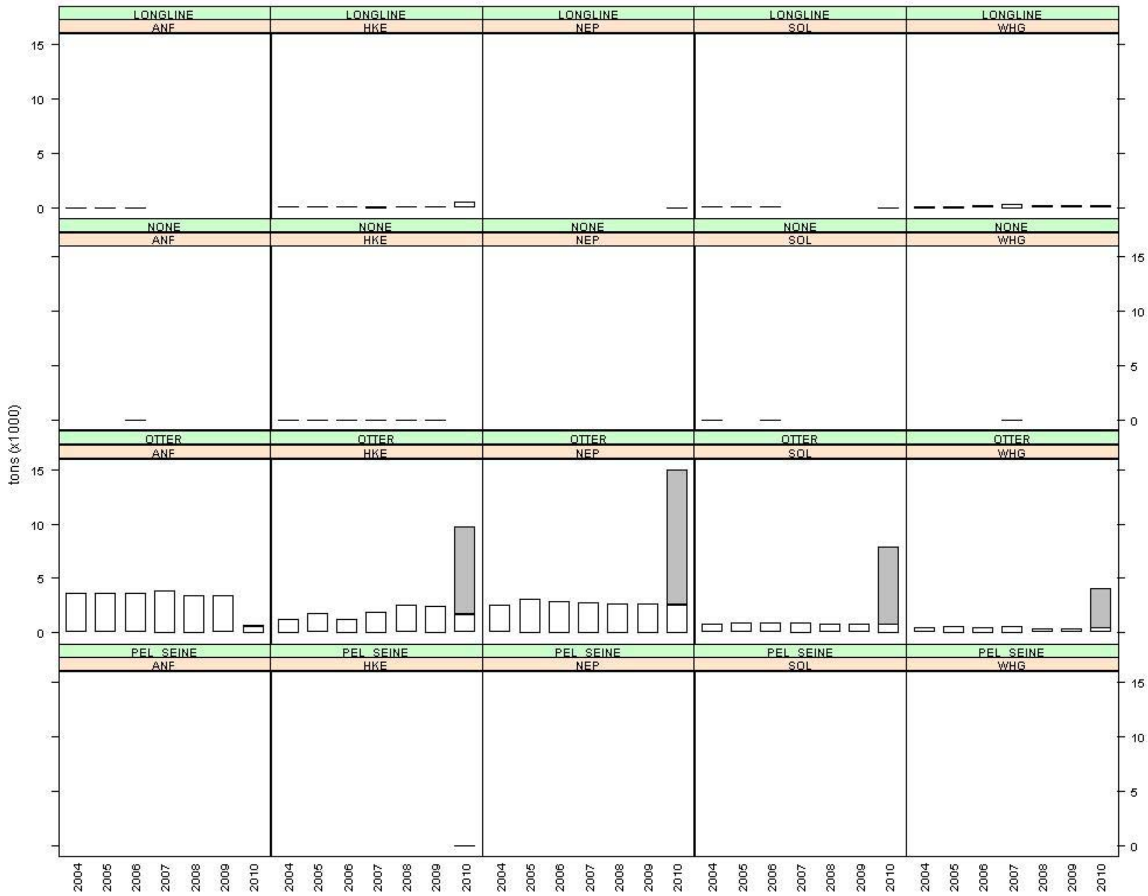


Fig. 10.3.1 Continued – Bay of Biscay - Landings (t) and discard (t) by derogation and species, 2003-2010 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

Fig. 10.3.1 Continued – Bay of Biscay - Landings (t) and discard (t) by derogation and species, 2003-2010 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

10.4. Trend in LPUE of anglerfish, hake, sole and Nephrops

Very limited discards are available for these species, therefore LPUE is presented in Tables 10.4.1 to 10.4.5 and Figures 10.4.1 to 10.4.5 respectively.

For anglerfish, the LPUE are quite similar among the major fleets. A decrease can be seen for gill and otter in the recent years and especially in 2010. This decrease is more important for trammel. LPUE for beam seems to fluctuate around 200 g/(KW*days).

Hake LPUE's by gill nets are much higher than all the other gears. A drop in 2006 and 2007 from 800 g/(KW*days) to less than 400 g/(KW*days) in 2009 was observed, however, the LPUE in 2010 is far above the highest ever observed in the time series.

Nephops are mainly caught by otters. Nephrop's LPUE fluctuate around 150 g/(KW*days).

Sole's LPUE by trammel are gradualy decreasing from 2003 onwards (from >500 g/(KW*days) to 400 g/(KW*days. Beam LPUE are fluctuating around 450 g/(KW*days).

Table 10.4.1 – Bay of Biscay - anglerfish LPUE (g/(kW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay is sparse and therefore LPUE is provided in the table.

ANNEX	SPECIES	REG AREA COD	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
BoB	ANF	BoB	BEAM	184	12	208	147	145	242	211	198	216
BoB	ANF	BoB	DEM_SEINE	0	0	0	0	0	0	0	0	0
BoB	ANF	BoB	DREDGE	2	2	2	0	0	2	3	0	2
BoB	ANF	BoB	GILL	157	210	139	118	184	183	193	52	142
BoB	ANF	BoB	LONGLINE	0	2	1	2	0	0	0	0	0
BoB	ANF	BoB	none		0	0	9	0	0	0	0	0
BoB	ANF	BoB	OTTER	295	273	194	160	157	163	163	43	132
BoB	ANF	BoB	PEL_TRAWL	10	20	0	0	1	3	3	4	3
BoB	ANF	BoB	POTS	0		0	0	0	0	0	0	0
BoB	ANF	BoB	TRAMMEL	177	222	100	87	72	98	98	5	70

Table 10.4.2 – Bay of Biscay - hake LPUE (g/(kW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay are sparse and therefore LPUE is provided in the table.

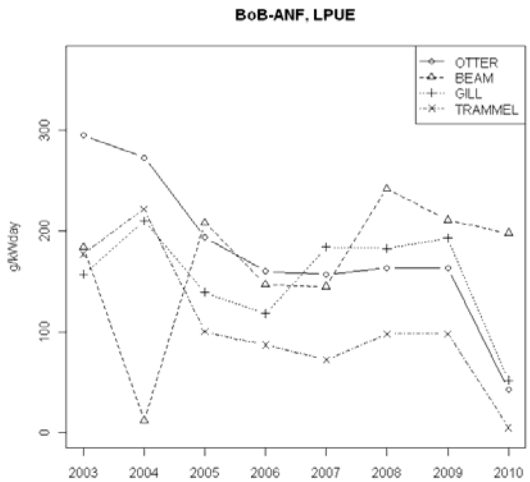
ANNEX	SPECIES	REG AREA COD	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
BoB	HKE	BoB	BEAM	22	16	18	11	2	4	8	6	6
BoB	HKE	BoB	DEM_SEINE	0	0	0	0	0	0	0	92	89
BoB	HKE	BoB	DREDGE	7	0	4	5	2	2	3	7	3
BoB	HKE	BoB	GILL	1011	833	836	342	331	852	862	2050	1260
BoB	HKE	BoB	LONGLINE	110	54	50	57	84	69	73	378	205
BoB	HKE	BoB	none		6	5	3	14	4	4	0	4
BoB	HKE	BoB	OTTER	127	94	93	57	77	119	119	114	118
BoB	HKE	BoB	PEL_SEINE	0	0	0	0	0	0	0	1	0
BoB	HKE	BoB	PEL_TRAWL	73	26	51	33	77	31	35	76	49
BoB	HKE	BoB	POTS				0	0	0	0	9	8
BoB	HKE	BoB	TRAMMEL	92	78	29	17	37	32	32	42	35

Table 10.4.3 – Bay of Biscay - Nephrops LPUE (g/(kW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay are sparse and therefore LPUE is provided in the table.

ANNEX	SPECIES	REG AREA COD	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
BoB	NEP	BoB	BEAM	5	6	9	6	3	1	1	3	2
BoB	NEP	BoB	DREDGE	0	0	4	0	0	2	3	14	4
BoB	NEP	BoB	GILL	0	1	0	0	0	1	1	0	1
BoB	NEP	BoB	LONGLINE	0	0				0	0	1	0
BoB	NEP	BoB	none				0	0	0	0	0	0
BoB	NEP	BoB	OTTER	210	190	168	129	114	128	127	179	141
BoB	NEP	BoB	PEL_TRAWL	1		0	0	1	20	24	1	14
BoB	NEP	BoB	POTS	4	5	0		0	0	0	4	4
BoB	NEP	BoB	TRAMMEL	0	1	0	1	0	0	0	1	0

Table 10.4.4 – Bay of Biscay - sole LPUE (g/(kW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay are sparse and therefore LPUE is provided in the table.

ANNEX	SPECIES	REG AREA COD	REG GEAR COD	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2008-2010
BoB	SOL	BoB	BEAM	466	469	401	401	406	369	392	499	422
BoB	SOL	BoB	DEM_SEINE	0	0	0	0	0	0	0	0	0
BoB	SOL	BoB	DREDGE	5	2	6	3	6	5	5	0	4
BoB	SOL	BoB	GILL	152	152	112	67	50	54	55	40	49
BoB	SOL	BoB	LONGLINE	0	24	15	9	0	0	0	3	1
BoB	SOL	BoB	none	0	6	0	14	0	0	0	0	0
BoB	SOL	BoB	OTTER	65	56	47	40	38	37	37	55	42
BoB	SOL	BoB	PEL_SEINE		0		0		0	0	0	0
BoB	SOL	BoB	PEL_TRAWL	0	0	0	0	1	3	3	2	3
BoB	SOL	BoB	POTS	0			0	0	0	0	0	0
BoB	SOL	BoB	TRAMMEL	776	719	463	367	332	427	427	379	412



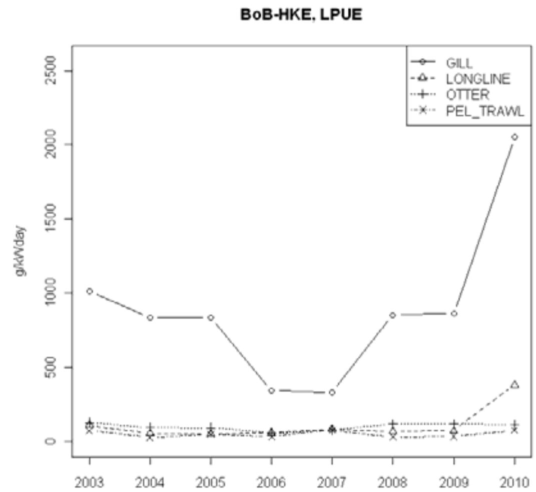
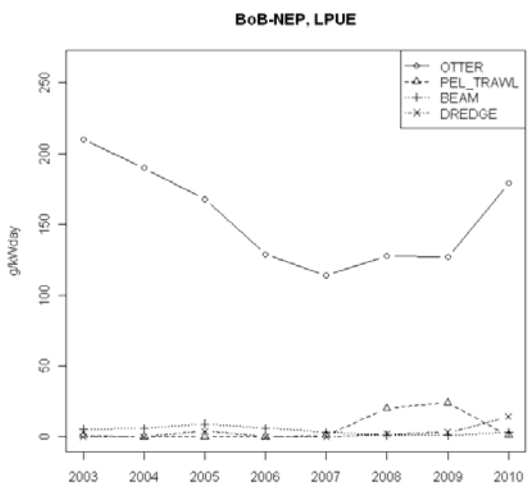


Figure 10.4.1- Bay of Biscay - anglerfish – LPUE (g/(KW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay are sparse and therefore the LPUE has been plotted.

Figure 10.4.2- Bay of Biscay - hake – LPUE (g/(KW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay are sparse and therefore the LPUE has been plotted.



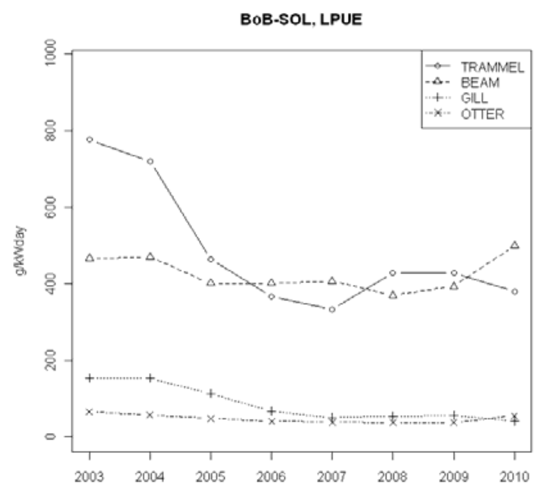


Figure 10.4.3- Bay of Biscay - nephrops – LPUE (g/(KW*days)) by derogation and year, 2003-2010. Note: Discard information for the Bay of Biscay are

Figure 10.4.4- Bay of Biscay - sole – LPUE (g/(KW*days)) by derogation and year, 2003-2009. Note: Discard information for the Bay of Biscay are sparse and therefore the LPUE has been plotted.

10.5. Ranked derogations according to relative contributions to sole catches

No ranking have been done for Bay of Biscay.

10.6. Unregulated gear in the Bay of Biscay

Table 10.2.1. gives the trends of the effort reported in this category. Given the category definition, it refers to non-regulated gear (pots etc.) only.

10.7. Fishing effort and catches (landings and discards) of sole and associated species of vessels <10m

10.7.1. General considerations regarding catches of vessels <10m

Table 10.7.1 shows a preliminary overview of the catches of some main species (anglerfish, hake, Nephrops, sole, and whiting in the Bay of Biscay by the vessels <10m in 2010. It should be noted that not all countries have submitted information and that the total figures are therefore likely to give an underestimation of the catches of this vessel category.

STECF-EWG-11-11 would like to mention that although these figures are underestimates, they indicate that at least 3% and 10% of the total sole catches respectively are taken by vessels <10m. 2010 is the year with the highest rate of the time series.

Table 10.7.1 – Bay of Biscay – Overview of anglerfish, hake, sole, Nephrops and whiting catches by vessels <10m 2003- 2010.

REG_AREA	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010
BoB	BEAM	ANF	117	9	180	139	142	189	195	179
BoB	DEM_SEINE	ANF								0
BoB	DREDGE	ANF	1	1	1	0	0	1	1	
BoB	GILL	ANF	253	404	481	477	572	541	554	156
BoB	LONGLINE	ANF	0	1	1	2	0	0	0	0
BoB	none	ANF		0	0	3	0	0	0	
BoB	OTTER	ANF	3268	3605	3593	3585	3877	3406	3393	616
BoB	PEL_TRAWL	ANF	42	38	0	1	3	5	5	7
BoB	POTS	ANF	0		0	0	0			0
BoB	TRAMMEL	ANF	226	352	355	437	380	476	476	22
Sum_O10m		**ANF**	**3907**	**4410**	**4611**	**4644**	**4974**	**4618**	**4624**	**980**
Sum_U10m		**ANF**	**34**	**45**	**64**	**55**	**32**	**19**	**19**	**20**
%			**1**	**1**	**1**	**1**	**1**	**0**	**0**	**2**
BoB	BEAM	HKE	14	12	15	10	2	3	6	5
BoB	DEM_SEINE	HKE							0	36
BoB	DREDGE	HKE	3	0	2	3	1	1	1	1
BoB	GILL	HKE	1632	1605	2891	1377	1026	2513	2485	6099
BoB	LONGLINE	HKE	34	22	34	57	78	54	54	448
BoB	none	HKE		1	1	1	4	2	2	
BoB	OTTER	HKE	1408	1234	1716	1269	1906	2486	2472	1637
BoB	PEL_SEINE	HKE	0	0	0	0	0	0	0	1
BoB	PEL_TRAWL	HKE	293	48	217	162	271	52	51	148
BoB	POTS	HKE				0	0			6
BoB	TRAMMEL	HKE	118	124	105	85	195	158	157	177
Sum_O10m		**HKE**	**3502**	**3046**	**4981**	**2964**	**3483**	**5269**	**5228**	**8558**
Sum_U10m		**HKE**	**98**	**89**	**62**	**108**	**156**	**137**	**137**	**195**
%			**3**	**3**	**1**	**4**	**4**	**3**	**3**	**2**
BoB	BEAM	NEP	4	4	8	6	3	1	1	3
BoB	DREDGE	NEP	0	0	2	0	0	1	1	2
BoB	GILL	NEP	1	2	0	2	1	3	3	0
BoB	LONGLINE	NEP	0	0				0	0	1
BoB	none	NEP				0	0	0	0	
BoB	OTTER	NEP	2329	2506	3123	2908	2801	2659	2650	2564
BoB	PEL_TRAWL	NEP	5		0	2	4	34	34	2
BoB	POTS	NEP	1	2	0		0			3
BoB	TRAMMEL	NEP	0	1	1	5	0	0	0	4
Sum_O10m		**NEP**	**2340**	**2515**	**3134**	**2923**	**2809**	**2698**	**2689**	**2579**
Sum_U10m		**NEP**	**4**	**7**	**21**	**15**	**9**	**0**	**0**	**20**
%			**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**
BoB	BEAM	SOL	296	320	350	381	398	287	362	451
BoB	DEM_SEINE	SOL								0
BoB	DREDGE	SOL	2	2	3	2	3	2	2	1
BoB	GILL	SOL	245	293	387	270	156	159	158	118
BoB	LONGLINE	SOL	0	10	10	9	0	0	0	3
BoB	none	SOL	0	1	0	5	0	0	0	
BoB	OTTER	SOL	716	745	865	890	948	777	773	795
BoB	PEL_SEINE	SOL		0		0				0
BoB	PEL_TRAWL	SOL	2	0	2	1	2	5	5	3
BoB	POTS	SOL	0			0	0			1
BoB	TRAMMEL	SOL	991	1143	1650	1838	1744	2080	2077	1614
Sum_O10m		**SOL**	**2252**	**2514**	**3267**	**3396**	**3251**	**3310**	**3377**	**2986**
Sum_U10m		**SOL**	**94**	**121**	**105**	**188**	**224**	**133**	**133**	**297**
%			**4**	**5**	**3**	**6**	**7**	**4**	**4**	**10**
BoB	BEAM	WHG	1	0	3	2	4	1	2	3
BoB	DEM_SEINE	WHG							0	86
BoB	DREDGE	WHG	2	2	1	1	0	0	0	0
BoB	GILL	WHG	62	39	53	64	52	55	55	46
BoB	LONGLINE	WHG	9	64	110	152	302	170	170	156
BoB	none	WHG	0	0		0	3	0	0	
BoB	OTTER	WHG	350	418	610	483	576	330	329	435
BoB	PEL_SEINE	WHG				0				
BoB	PEL_TRAWL	WHG	238	80	130	87	133	45	44	156
BoB	POTS	WHG					0			1
BoB	TRAMMEL	WHG	34	31	42	74	72	87	87	46
Sum_O10m		**WHG**	**696**	**634**	**949**	**863**	**1142**	**688**	**687**	**929**
Sum_U10m		**WHG**	**16**	**46**	**56**	**80**	**73**	**37**	**37**	**121**
%			**2**	**7**	**6**	**9**	**6**	**5**	**5**	**13**

10.8. Spatial distribution patterns of effective fishing effort 2003-2010

Figure 10.8.1 to 10.8.11 show the spatial distribution of the effective fishing effort for all the different fleets operating in the Bay of Biscay during the period 2003 to 2010. The pattern seems similar for the whole period for most of the fleets.

The effort is mostly distributed all across the gulf with somewhat higher values close to the estuaries (Gironde, baie de vilaine…).

For trammel and Otter that are the two fisheries for which the effort increased between 2003-2007, the spatial effort allocation seems to follow the same trends, starting mainly in south Brittany and increasing in all the area in the following years.

The Demersal seine fishery started in 2009 and increased in 2010.

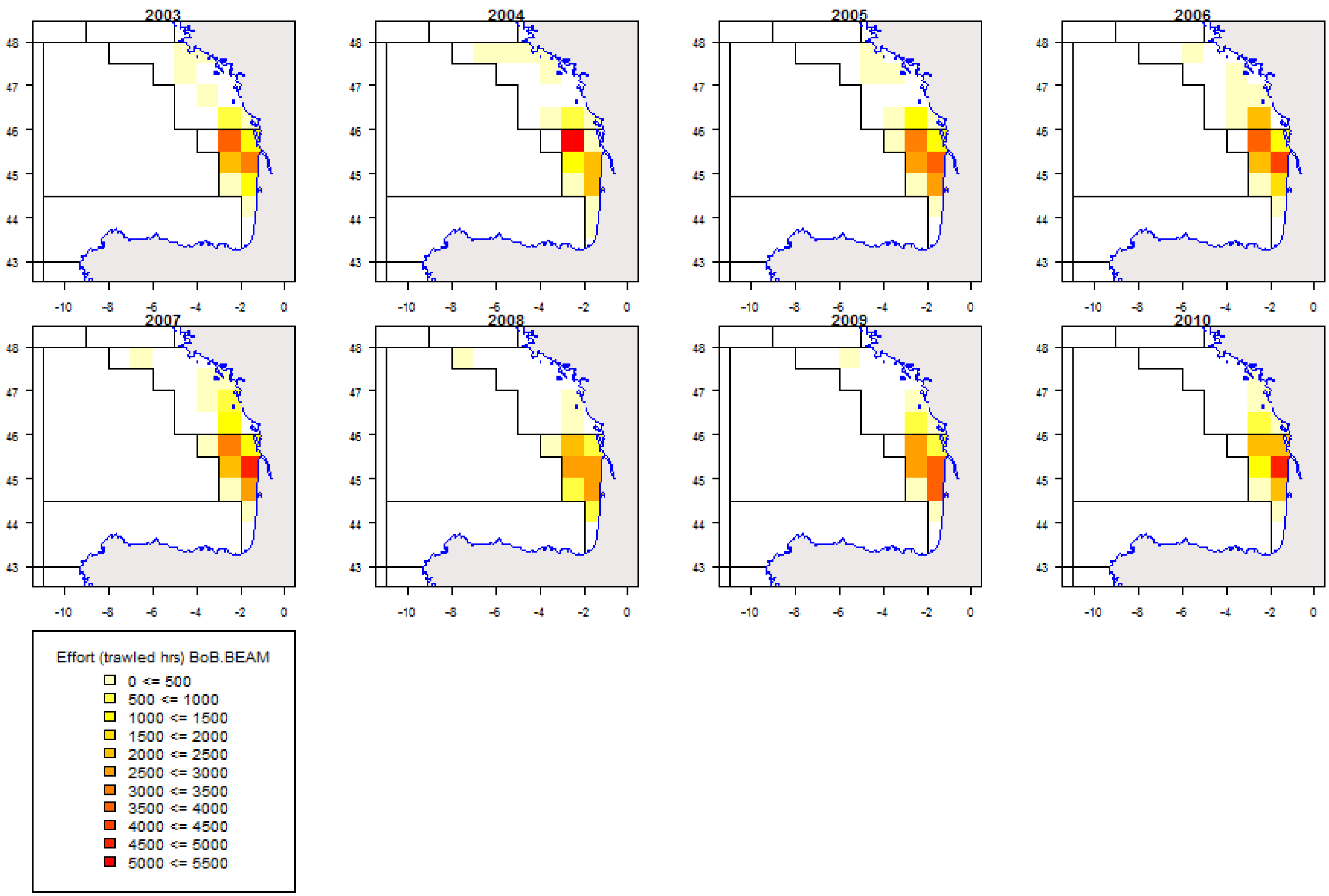


Figure 10.8.1. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for the Beam trawl fleet, 2003-2010.

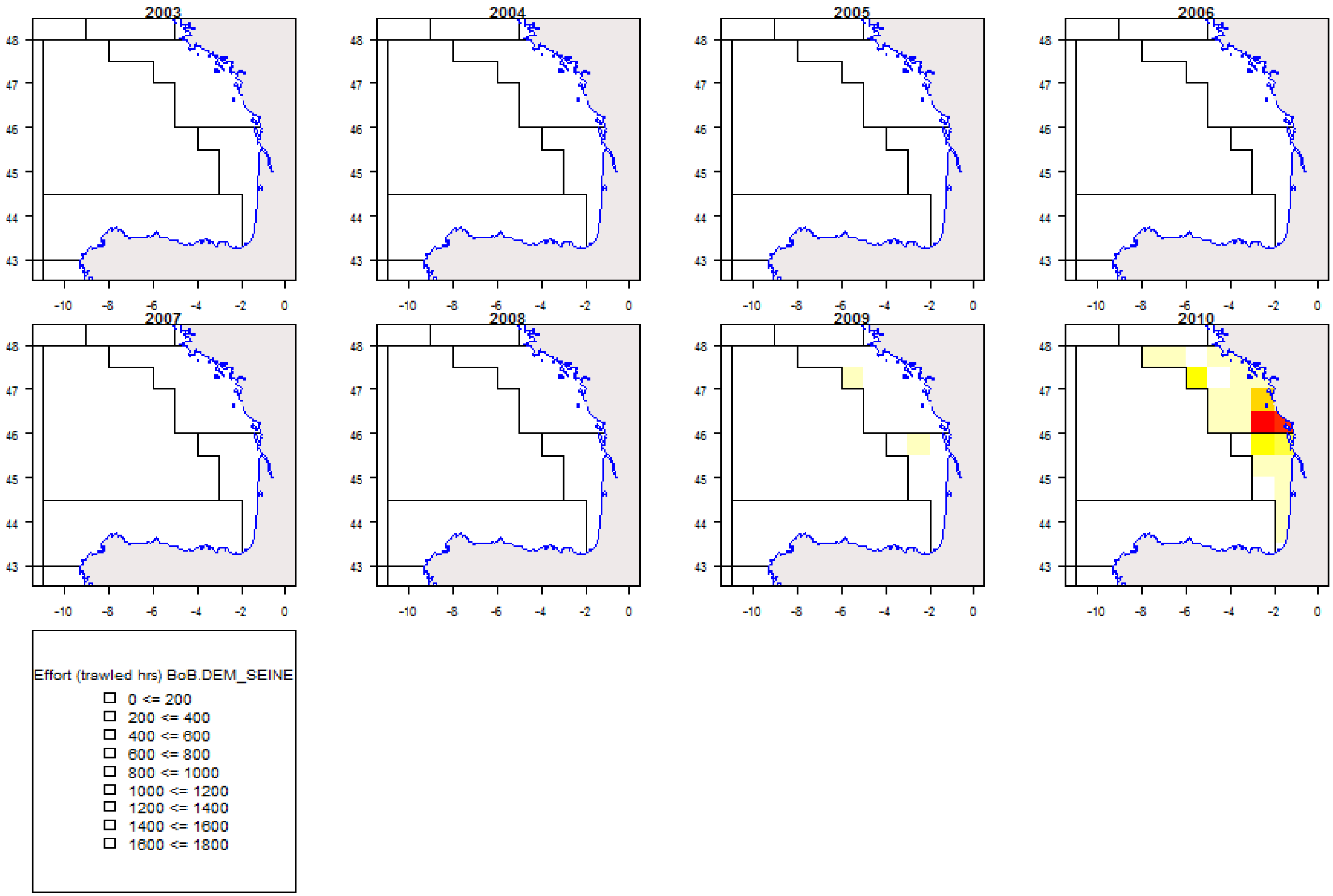


Figure 10.8.2. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Demersal Seine, 2003-2010.

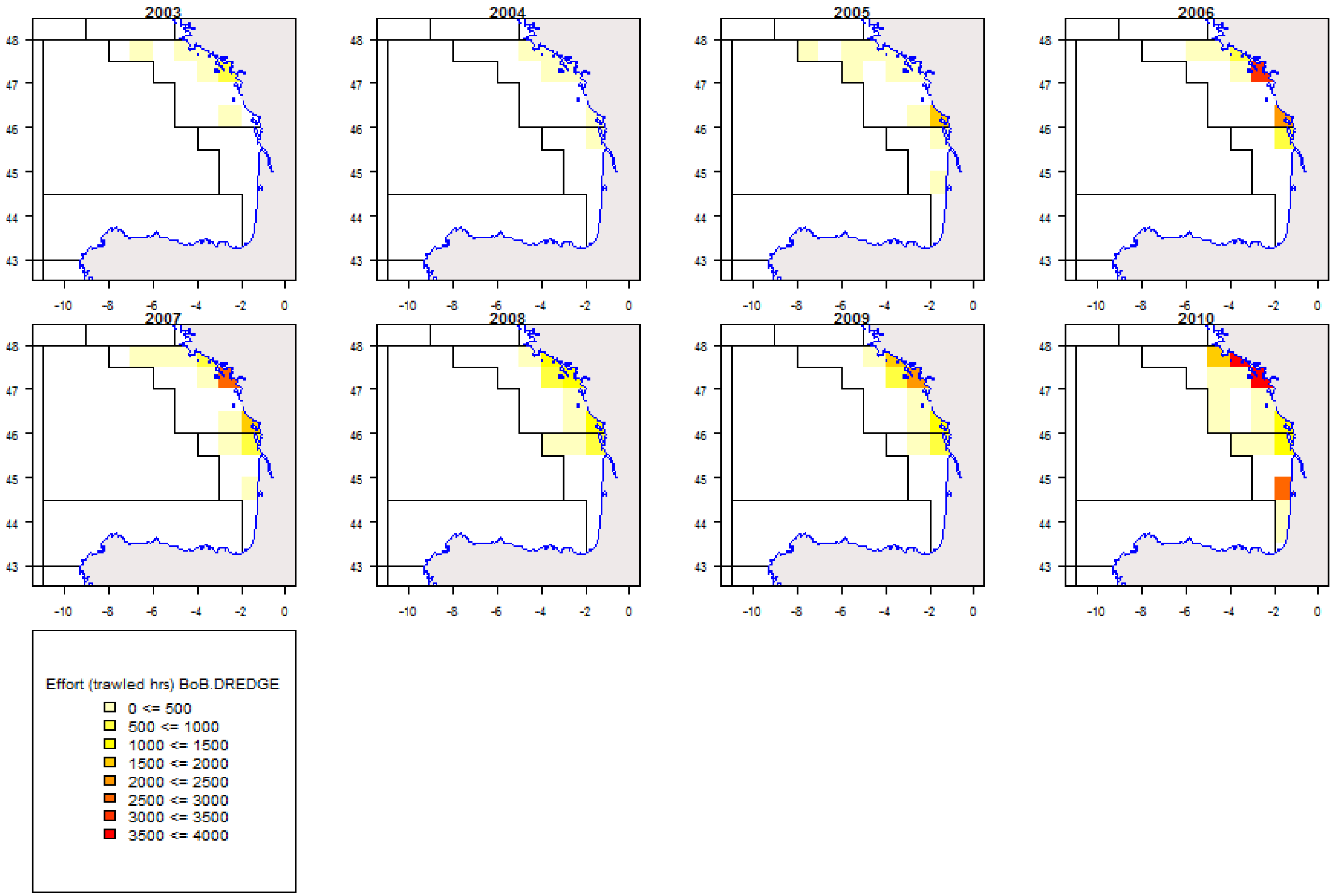


Figure 10.8.3. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Dredges, 2003-2010.

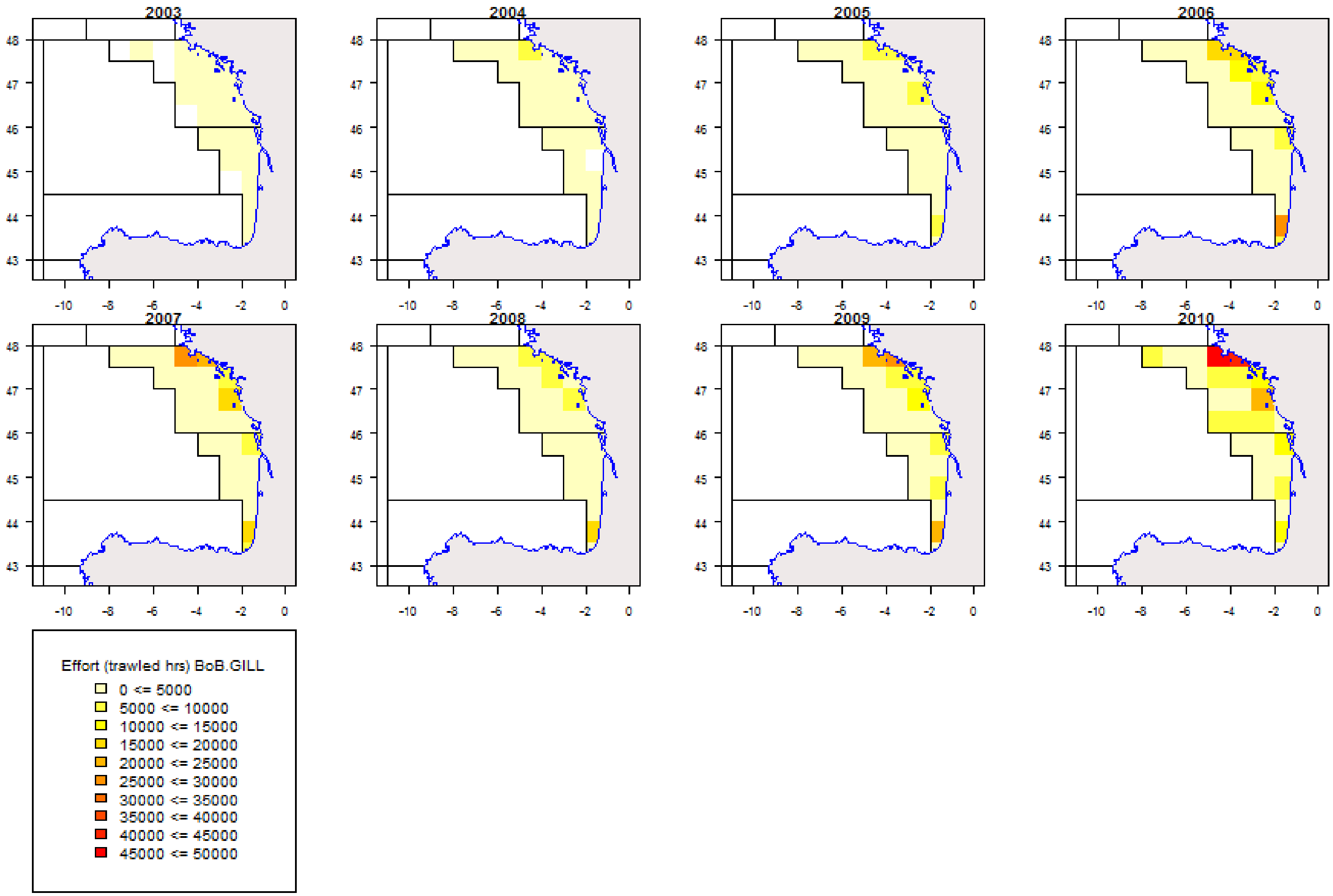


Figure 10.8.4. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Gill nets, 2003-2010.

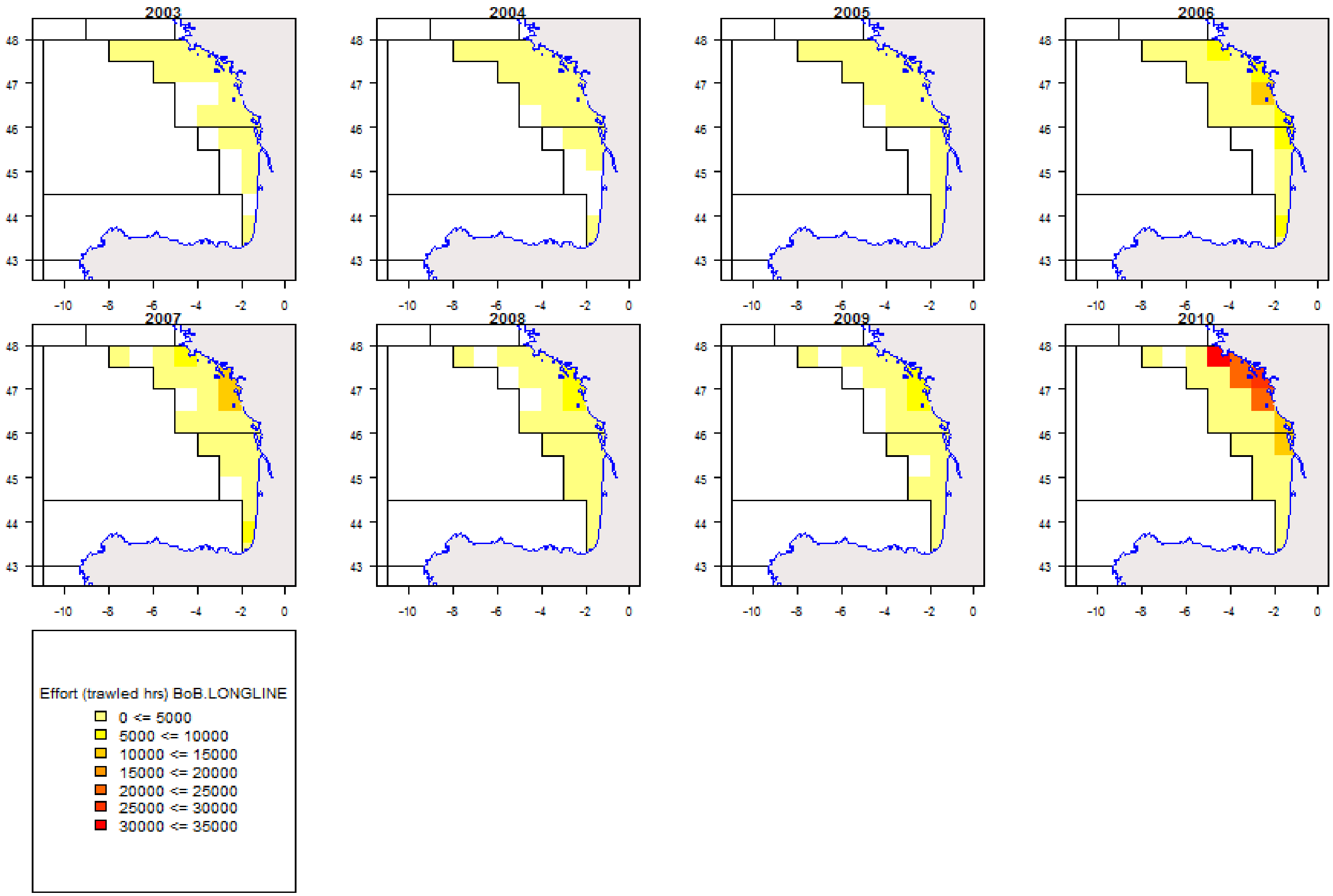


Figure 10.8.5. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Longlines, 2003-2010.

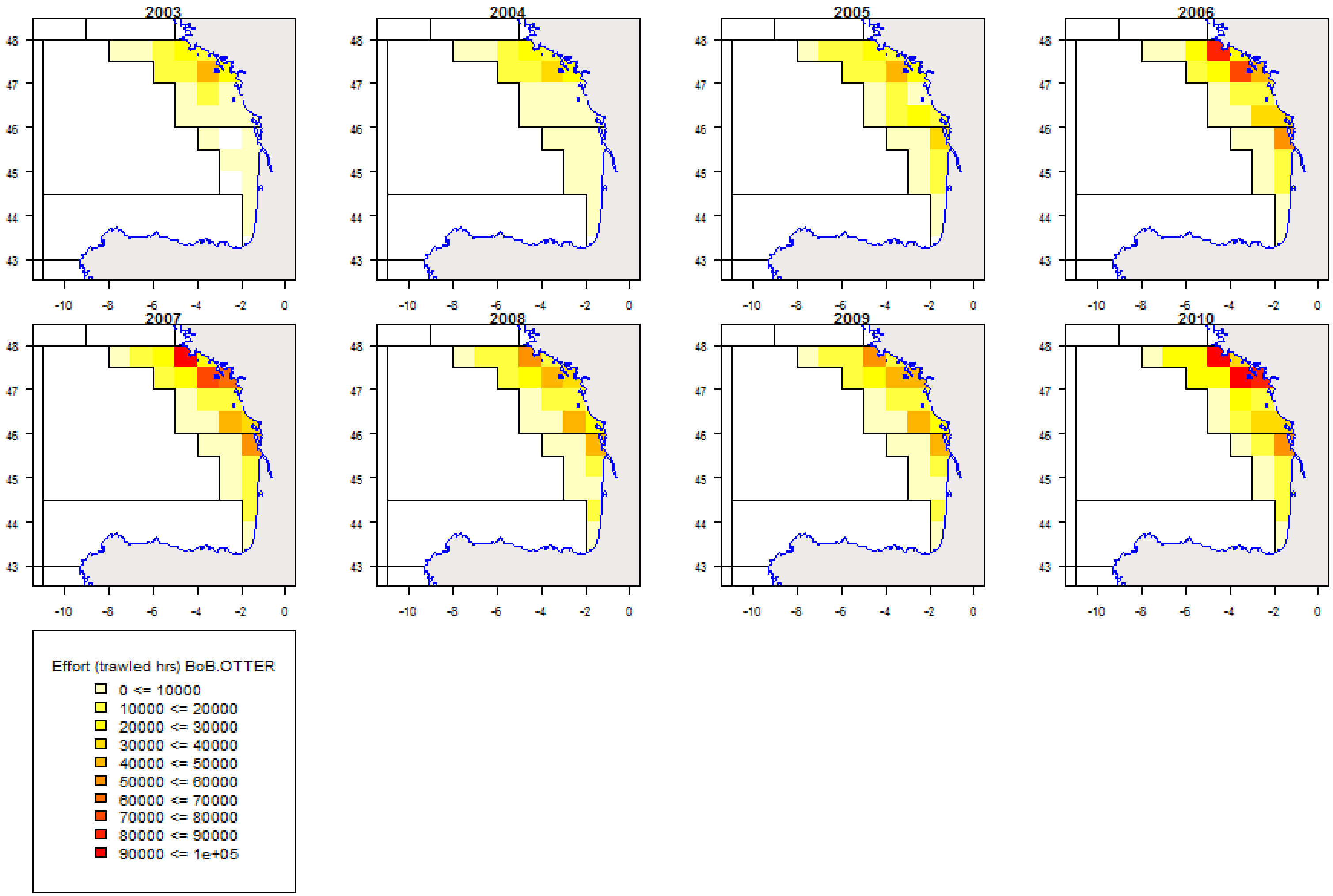


Figure 10.8.6. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Otter Trawl, 2003-2010.

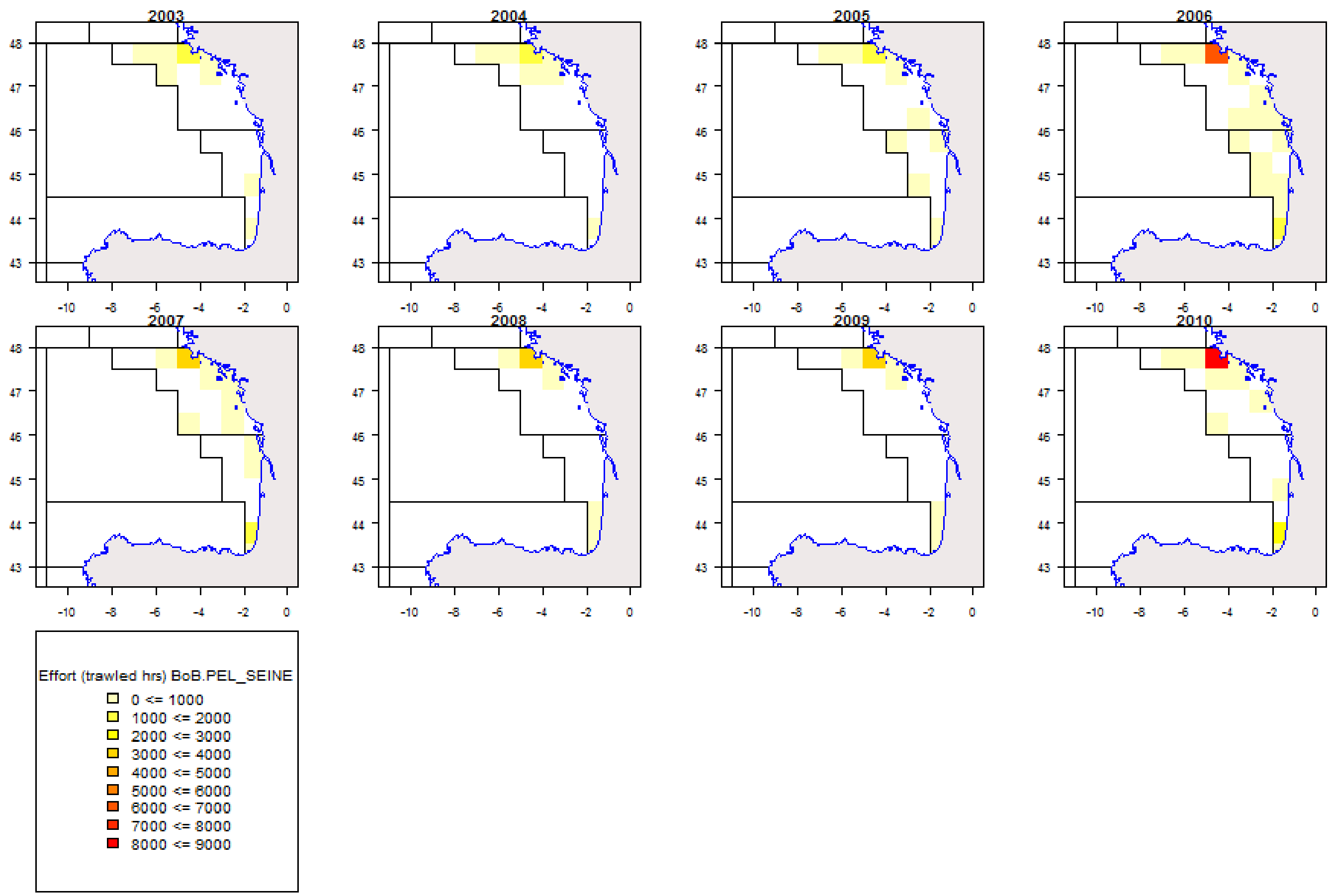


Figure10.8.7. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Pelagic Seine, 2003-2010.

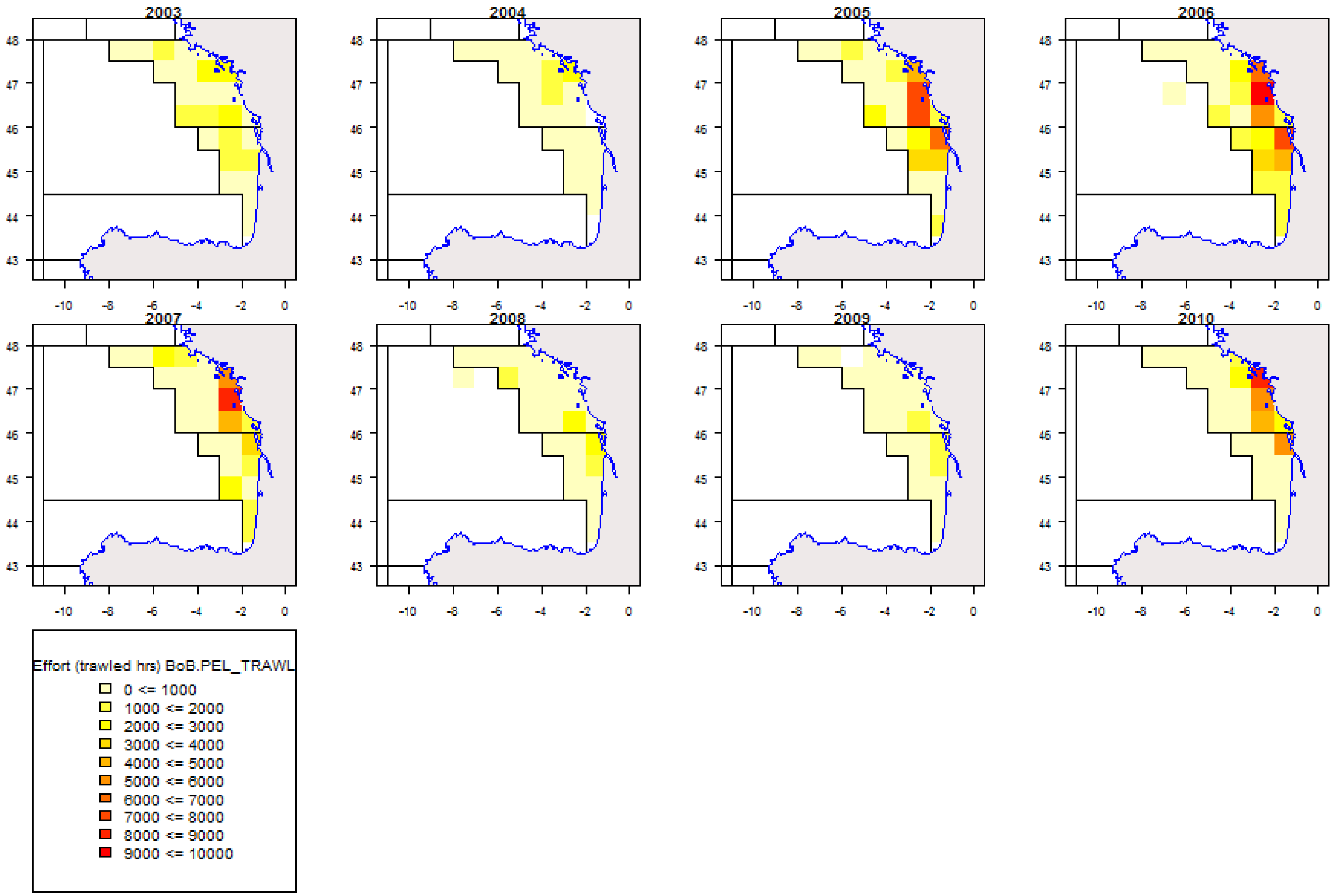


Figure 10.8.8. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Pelagic Trawl, 2003-2010.

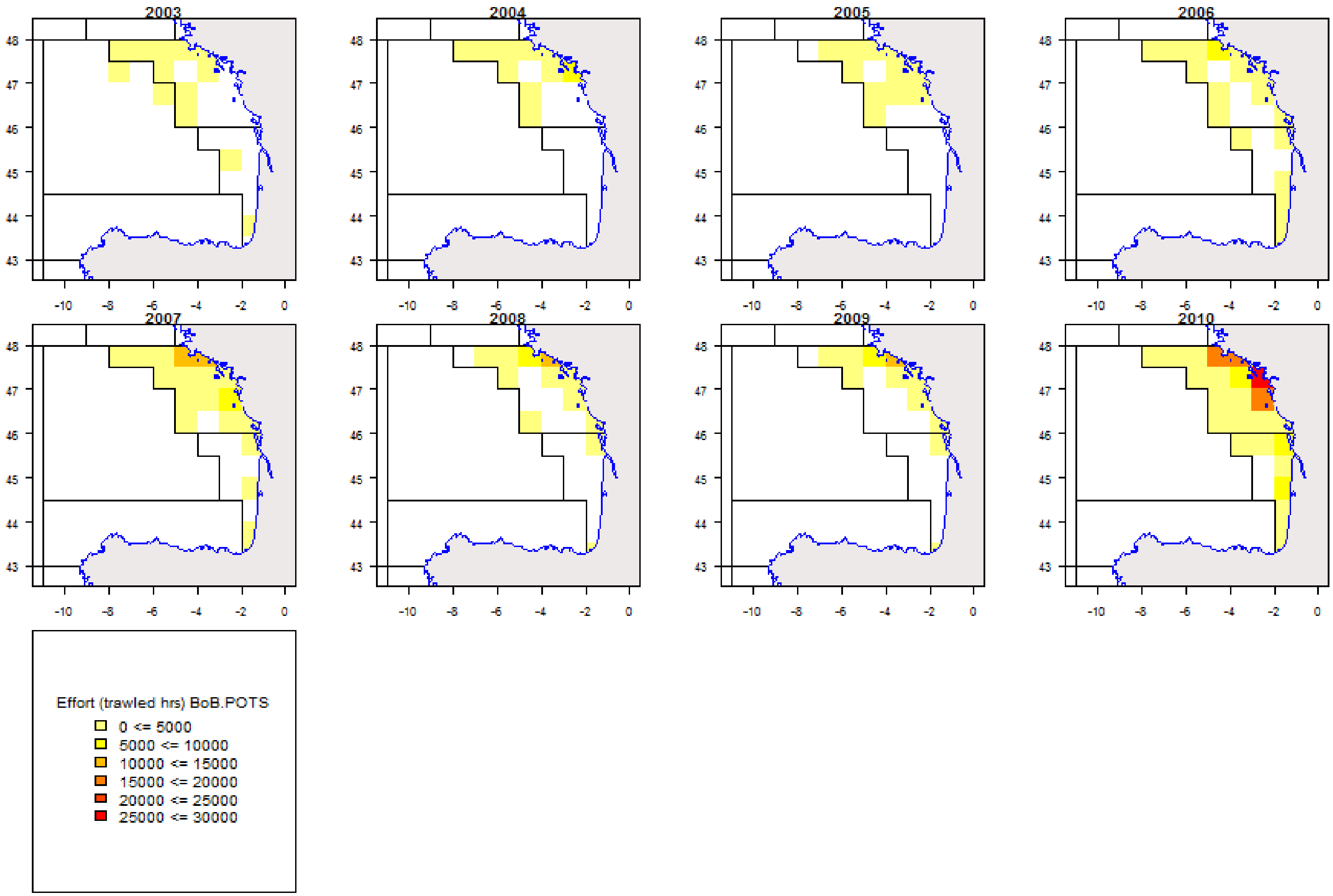


Figure 10.8.9. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Pots, 2003-2010.

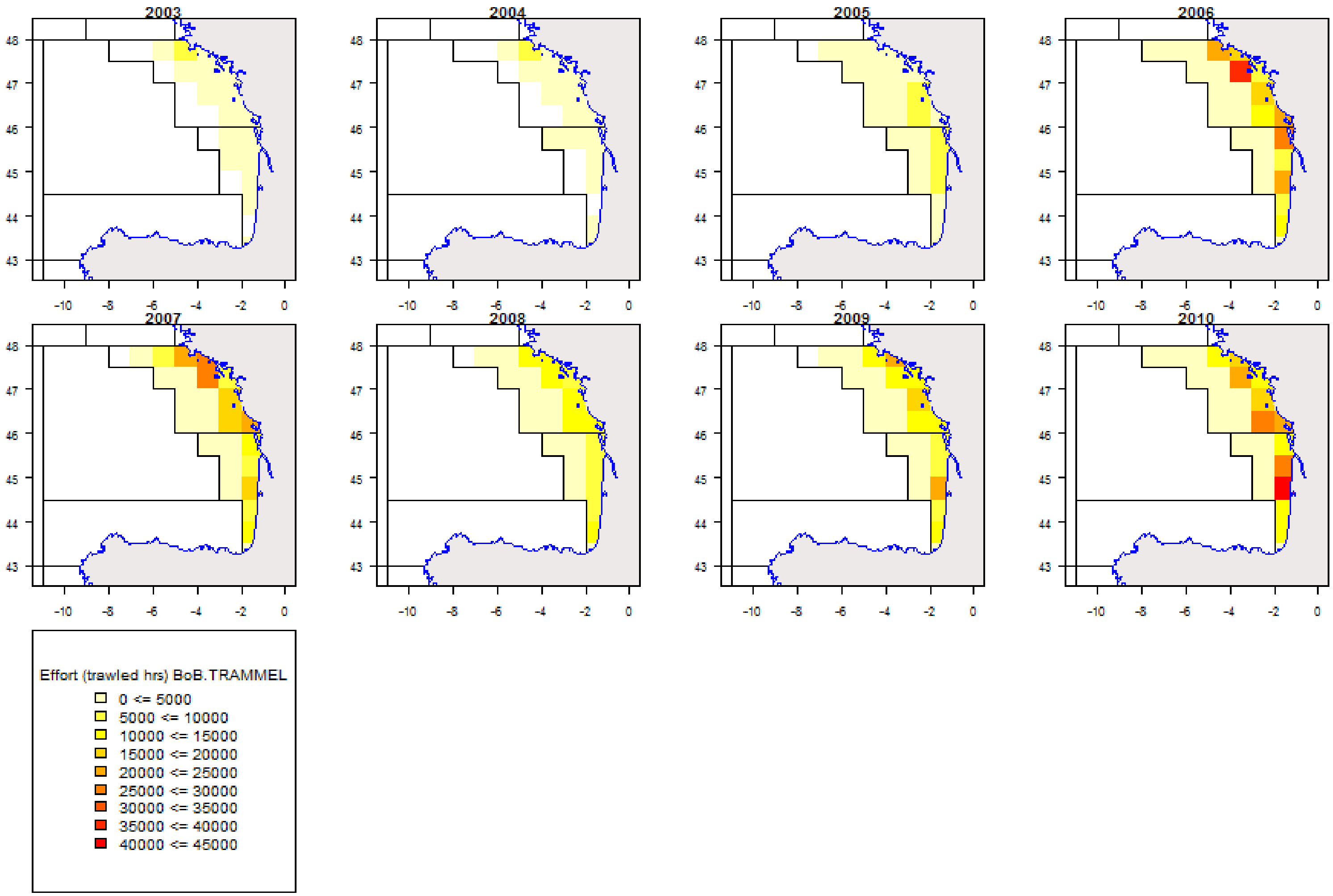


Figure 10.8.10. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Trammel Nets, 2003-2010.

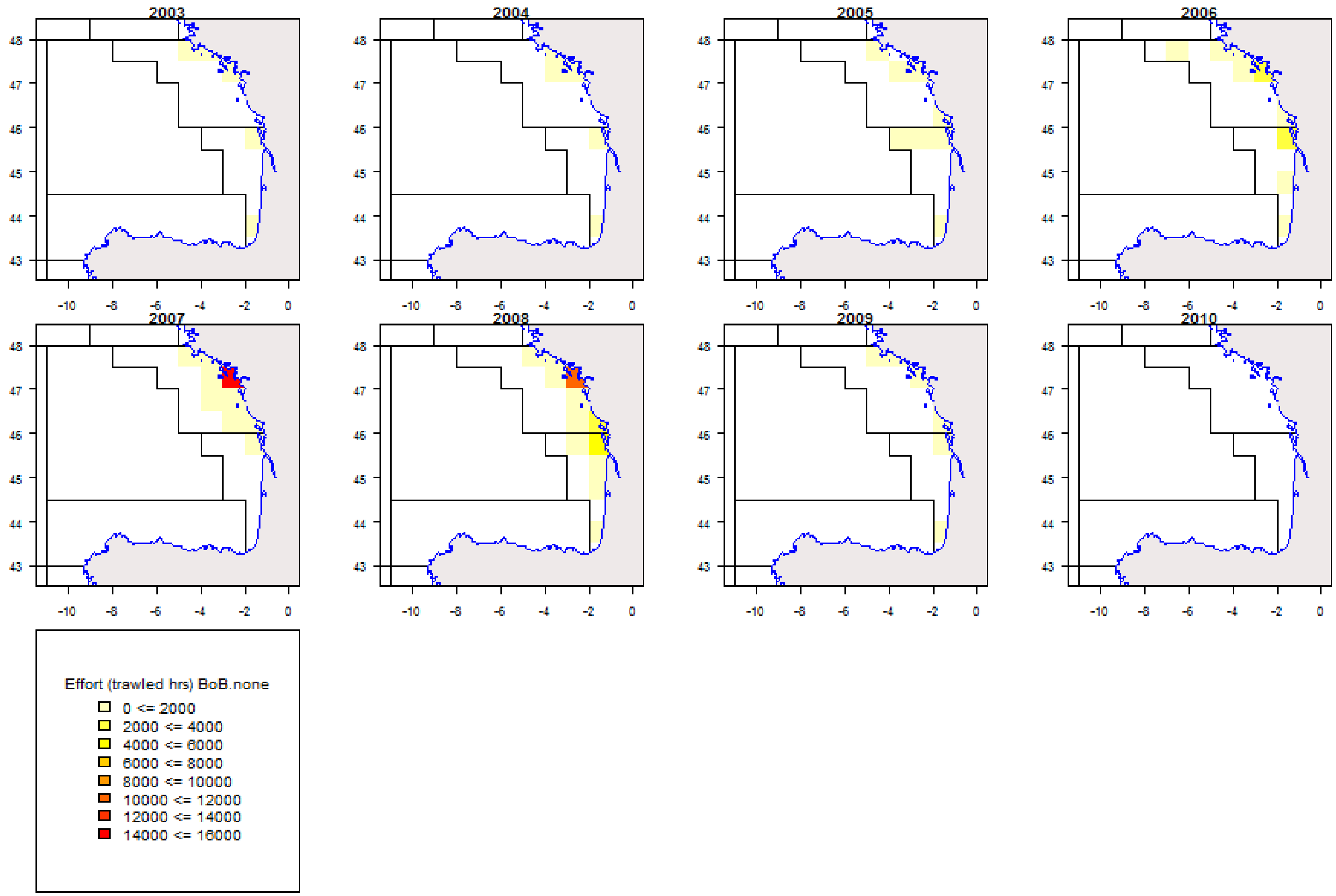


Figure 10.8.11. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for None (“none-none”), 2003-2010.

11. COMMENTARY ON CPUE AND THE EFFECT OF DISCARD DATA QUALITY

In its 36st plenary report of April 2011, STECF presented a preliminary overview of the gear group specific conversion factors for the implementation of the exchange of maximum allowable fishing effort across groups of effort regulated gears, as estimated in accordance with Article 17 of Council Reg. (EC) No 1342/2008. The conversion factors were based on CPUE as estimated by STECF (SGMOS 10-05) and their representativeness in terms of the proportion of the total landings from which CPUE is derived, indicated by a traffic light approach.

The representativeness of CPUE values is crucial for the implementation of the transfer of maximum allowable fishing effort between groups of effort regulated gears, which are defined in Council Reg. 1342/2008. EWG provides an evaluation of the representativeness of the estimated CPUE values based on the 2011 data. The representativeness of the overall estimated CPUE data largely depends on two key factors: i) the proportion of member states taking significant catches from an area using a particular gear *that have sampled* that gear and ii) *the quality and extent of sampling* by each member state for any particular gear. Although relevant parameters regarding data quality have been defined and requested in that data call, only few Member States submitted all the relevant information. The level of coverage and accuracy of the data collected by the Member States affects the reliability of the raised discard estimate submitted by the member state and therefore the quality of its catch estimate. STECF EWG summarized results relating to the first factor which essentially influences the extent to which discard raising procedures in the SGMOS database are required to be applied. STECF EWG also made a preliminary investigation into the second factore.

Table 11.1 provides results for annual ratios of cod landings by fisheries with quantitative discard information versus total cod landings by these fisheries. Judging the ratio value that constitutes ‘adequate sampling is somewhat subjective. Here a value greater than 0.1 in any of the last three years 2008 -2010 is considered reasonable, while a value between 0 and 0.1 provides some information but is less than ideal. No sampling at all delivers a zero value and is inadequate. Consistent with the insufficient number of fisheries with respective discard estimates, the immediate conclusion is that the ratio is very low for some of the passive gears in all four management areas 3a-d. STECF notes, however, that discard information for the major gear group TR2 in area 3a cover almost all landings reported. Although the ratio of landings with quantitative discard estimates in area 3b of gear groups BT2, TR1 and TR2 are variable, STECF concludes that they appear to be sufficiently high and that the raising procedure applied to estimate the overall discards shall result in representative CPUE values. Coverage of submitted discard estimates in area 3c is very limited for some gears. In area 3d, STECF concludes the ratio between landings with discards and the total landings for TR1 and TR2 is high enough and therefore the raising procedure applied to estimate the overall discards is appropriate to estimate representative CPUE.

Table 11.1 Ratios of landings of discard sampled gears to total landings for gears in regulated areas 3a to 3d

ANNEX	REG AREA COD	REG GEAR COD	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010
IIa	3a	GN1	COD								0.01
IIa	3a	GT1	COD								0.52
IIa	3a	none	COD								1
IIa	3a	OTTER	COD								0.95
IIa	3a	POTS	COD		0			0	0		1
IIa	3a	TR1	COD	0.43	0.38	0.3	0.35	0.38	0.21	0.05	0.22
IIa	3a	TR2	COD	0.77	0.9	0.99	0.99	1	0.97	0.97	0.91
IIa	3b	BT1	COD	0.01			0.83		0.87		
IIa	3b	BT2	COD	0	0.19	0.22	0.81	0.92	0.81	0.24	0.93
IIa	3b	DEM_SEINE	COD	0	1	1		1	0		
IIa	3b	GN1	COD	0.01	0	0.01			0	0	0.04
IIa	3b	GT1	COD					0	0	0	0.04
IIa	3b	none	COD								0.81
IIa	3b	OTTER	COD	0	0	0.3	0	0.02	0.39	0.54	0.65
IIa	3b	PEL_SEINE	COD	0	1	1	1	0			1
IIa	3b	POTS	COD								0.11
IIa	3b	TR1	COD	0.87	0.83	0.77	0.68	0.78	0.75	0.74	0.81
IIa	3b	TR2	COD	0.54	0.6	0.65	0.65	0.51	0.54	0.48	0.51
IIa	3b	TR3	COD		0.04	0					0
IIa	3c	BT2	COD			0.02		0.51	0.56	0.8	0.66
IIa	3c	OTTER	COD		0.34	0		0	0		0
IIa	3c	POTS	COD		0.43						
IIa	3c	TR1	COD	0.05	0.14	0.01	0	0.01			
IIa	3c	TR2	COD	0.01	0.13	0.28	0.13	0.07	0.1	0	0.29
IIa	3d	DEM_SEINE	COD	1	0	0	0	0	0	0	0
IIa	3d	OTTER	COD	0.41							0
IIa	3d	TR1	COD	0.72	0.7	0.69	0.71	0.66	0.6	0.48	0.78
IIa	3d	TR2	COD	0.87	0.76	0.78	0.56	0.47	0.66	0.67	0.02

Table 11.2 presents the gear group specific conversion factors for the implementation of the exchange of maximum allowable fishing effort across groups of effort regulated gears as estimated in accordance with Article 17 of Council Reg. (EC) No 1342/2008. Individual tables cover areas 3a to 3d. The conversion factors are based on CPUE as estimated by STECF (EWG 11-11) and their representativeness is indicated by a traffic light approach. STECF considers the conversion factors between donor and receiving vessels as sufficiently representative when highlighted green (good) and yellow (fair). STECF considers the respective conversion factors unrepresentative if highlighted in red and therefore recommends that such factors should not be applied for effort transfers between regulated gears.

Table 11.2 Conversion factors for exchange of effort between gears in areas 3a to 3d. Green cells provide reasonably reliable conversions, yellow are fairly reliable but red are unreliable (no discard data collected).

3a Kattegat

	donor gear	receiving gear GN1	GT1	LL1	TR1	TR2	TR3
3a	GN1		1	0.321	1	1	1
3a	GT1	0.189		0.06	0.202	0.33	1
3a	LL1	1	1		1	1	1
3a	TR1	0.931	1	0.299		1	1
3a	TR2	0.571	1	0.183	0.613		1
3a	TR3	0.137	0.727	0.044	0.147	0.24	

3b North Sea Skaggerak

	donor gear	receiving gear BT1	BT2	GN1	GT1	LL1	TR1	TR2	TR3
3b	BT1		1	0.21	1	0.67	0.18	0.725	1
3b	BT2	0.359		0.075	0.588	0.241	0.064	0.26	1
3b	GN1	1	1		1	1	0.855	1	1
3b	GT1	0.61	1	0.128		0.409	0.11	0.442	1
3b	LL1	1	1	0.313	1		0.268	1	1
3b	TR1	1	1	1	1	1		1	1
3b	TR2	1	1	0.29	1	0.924	0.248		1
3b	TR3	0.133	0.371	0.028	0.218	0.089	0.024	0.097	

3c Irish Sea

	donor gear	receiving gear BT2	GN1	GT1	LL1	TR1	TR2
3c	BT2		0.009	0.091	0.014	0.072	0.636
3c	GN1	1		1	1	1	1
3c	GT1	1	0.104		0.15	0.795	1
3c	LL1	1	0.692	1		1	1
3c	TR1	1	0.13	1	0.188		1
3c	TR2	1	0.015	0.143	0.021	0.113	

3d West of Scotland

	donor gear	receiving gear BT1	BT2	GN1	LL1	TR1	TR2
3d	BT1		1	0.009	1	0.001	0.013
3d	BT2	1		0.009	1	0.001	0.013
3d	GN1	1	1		1	0.065	1
3d	LL1	1	1	0.009		0.001	0.013
3d	TR1	1	1	1	1		1
3d	TR2	1	1	0.727	1	0.047	

In an attempt to get an overview of the quality of discard data, STECF-EWG 11-11 asked, prior to its September meeting, all Member states to provide data of their discard sampling coverage in terms of sampled landings by species in relation to total landings by species; as well as sampled effort in relation to total effort deployed, both by regulated gear group and area. However, since the landings ratio for single species does not always reflect the actual sampling coverage (i.e. for species that are not landed, or selective gears that exclude some species but still generate discards), it was agreed to use only the effort data as an indicator for quality of discard data. Although the STECF-EWG data call requests Member States to provide quarterly aggregated data, and therefore also discard information by quarter, STECF-EWG found it not opportune to provide quarterly effort ratios but yearly ratios as some Member States aggregate sometimes discard samples over quarters to obtain acceptable estimates.

The request for sampling coverage data was made shortly before the meeting and not all countries were able to provide the data in time. The tabulated information below should therefore only be seen as a preliminary attempt in providing discard quality. Data were obtained by Belgium (BE), Denmark (DK), Ireland (IE), UK England and Wales (UKE), UK Northern (UKN), UK Scotland (UKS) and Sweden (SE).

Data is presented in Table 11.3 as percent observed nominal effort (kW*days) out of total nominal effort for each of the regulated gear groups (TR1, TR2; TR3, BT1, BT2, GN1, GT1 and LL1) of the multi-annual plans for cod in Kattegat (3a); Skagerrak, North Sea, 2EU and Eastern Channel (3b); the Irish Sea (3c) and West of Scotland (3d). Information is also presented for the Celtic Sea (7e-k).

Table 11.3

	BE			DK			IE			SE			UKE			UKS		
3a	Total	Sampled	%	Total	Sampled	%	Total	Sampled	%	Total	Sampled	%	Total	Sampled	%	Total	Sampled	%
TR1				5736	19	0.3%				12352		0.0%						
TR2				9497	59	0.6%				1401791	10229	0.7%						
TR3				29		0.0%												
BT1																		
BT2																		
GT1				375	19	5.1%												
GN1				2893	19	0.7%												
LL1																		
3b																		
TR1				7592	65	0.9%				210946	0	0.0%	1685226	24901	1.5%	3172	32	1.0%
TR2				9158	34	0.4%				817768	14502	1.8%	1720026	12182	0.7%	1731	10	0.6%
TR3				1183	0	0.0%				66006	0	0.0%	718	0	0.0%			
BT1													202685					
BT2	4344383	115294	2.7%										3528676	4835	0.1%			
GT1				1050		0.0%												
GN1				7551	9	0.1%							189550	1306	0.7%			
LL1													57724		0.0%			
3c																		
TR1													25111	112	0.4%			
TR2							1187021	6590	0.6%				180844	1742	1.0%			
TR3																		
BT1																		
BT2	649225	54680	8.4%				245246	9933	4.1%				1598	0	0.0%			
GT1																		
GN1													2260	117.6	5.2%			
LL1																		
3d																		
TR1							816884	39317	4.8%							335	6	1.8%
TR2																14509	6	0.0%
TR3																		
BT1																		
BT2																		
GT1																		
GN1																		
LL1																		
7e-k																		
TR1							4026859	75632	1.9%									
TR2							3754087	24137	0.6%									
TR3																		
BT1																		
BT2	1987520	94768	4.8%															
GT1																		
GN1							214639	446	0.2%									
LL1																		

Figures are number of trips

probably not kW

Sampling in 7b, not included! Correct?

12. References

ICES, 2009. Report of the Working Group on the Assessment of Demersal Stocks of Hake, Monk and Megrim.

Gerritsen, H.D., McGrath, D. and Lordan, C., 2006. A simple method for comparing age-length keys reveals significant regional differences within a single stock of haddock (Melanogrammus aeglefinus). ICES J. Mar. Sci., 63(3): 1096-1100

Ratz H-J (2009) Some technical guidance towards national fleet specific fishing effort and catch data aggregation. Joint Research Centre Scientific and Technical Reports. EUR 23798 EN. 20pp

ANNEX 1: DATA CALL FROM 23 FEBRUARY 2011

Ref. Ares(2011)200418-23/02/2011

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

POLICY DEVELOPMENT AND CO-ORDINATION
COMMON FISHERIES POLICY AND AQUACULTURE

Brussels,
MARE A2/MT/dos D(2011)

FAX

To:	Permanent Representations of EU Member States	**Telephone:** **Fax:**	
Cc:	Ministries of EU Member States		
From:	Ernesto PENAS LADO	**Telephone:**	(32-2) 296 37 44
		Fax:	(32-2) 299 48 02
Number of pages:	3+21		
Subject:	**Fishing effort management schemes related to recovery and management plans in the Baltic Sea, the North Sea, to the Western waters, to the deep sea fisheries and review of fisheries located in the Celtic Sea.**		

Message:

Following a similar approach as has been implemented for the last six years, the Commission will consult the STECF 'Working Group on fishing effort regime evaluations' on a review of fisheries regulated through fishing effort management schemes adopted in application of

- ✓ the long term plan for cod stocks [R(EC) No 1342/2008],
- ✓ the recovery plan for Southern hake and Norway lobster stocks in the Cantabrian Sea and Western Iberian peninsula [R(EC) No 2166/2005],
- ✓ the multi-annual plan for the North Sea plaice and sole stocks [R(EC) No 676/2007],
- ✓ the multi-annual plan of Western Channel sole stock [R(EC) No 509/2007],
- ✓ the multi-annual plan for the cod stocks in the Baltic Sea [R(EC) No 1098/2007],
- ✓ the multi-annual plan for the sustainable exploitation of the stock of sole in the Bay of Biscay [R(EC) No 388/2006],

- ✓ R(EC) No 2347/2002 establishing specific access requirements and associated conditions applicable to fishing for deep sea stocks, and

- ✓ R(EC) No 1954/2003 on the management of the fishing effort relating to certain Community fishing areas and resources – so called Western Waters regime..

The meetings of the STECF Working Group will take place from 06 to 10 June 2011 and from 26 to 30 September 2011. Similarly to last year, the Commission will consult the STECF Working Group on an analysis of fisheries located in the Celtic Sea which would be affected by a possible extension of effort management related to demersal stocks in that area.

These reviews and analysis will be based on data as collected according to R(EC) No 1639/2001 and to R(EC) No 199/2008 establishing a Community framework for the collection and management of the data needed to conduct the common fisheries policy, supplemented by Commission Decision 2010/93/EU of 18 December 2009 (which repealed Commission Decision 2008/949/EC), as well as other scientific information collected at national level which would allow Member States to fulfil their cooperation obligation laid down in article 4 (3) of the Treaty on European Union. They will include:

- ✓ A synopsis of the biological status of the relevant resources;

- ✓ Details of historic effort deployed by all fishing vessels, even those of less than 10 m. Loa included, in each fishery, segregated by gear type and by Member State, for the 2000-2010 time period;

- ✓ Details of historic catches (landings and discards) made by all fishing vessels , those of less than 10 m. Loa included, in each fishery, segregated by age, by gear type and by Member State, for the 2003-2010 time period.

These data should characterise landings and discards structured by age for the period 2003-2010 and effort for the period 2000-2010.

However, if a Member State considers that data already received by the JRC and handled by the STECF for the 2000-2009 or 2003-2009 time periods do not have to be updated, the Member State is invited to limit the answer to the data call to data for the year 2010. In case where the Member State had not or only partially submitted requested data for the period 2003-2009, the Member State will have to submit data covering the overall periods of time (2003-2010 for catches and 2000-2010 for effort). In addition, Member States will be requested to provide relevant information explaining the need for update and the discrepancies possibly observed between the set of data submitted as answer to the last call and the set of data to be sent as answer to the current call.

To enable the STECF Working Group on fishing effort regime evaluations both to review such fishing effort management schemes and to analyse the fishing effort deployed in the Celtic Sea fisheries, Member States are invited to provide, as soon as possible and no later than **06 May 2011**, data to the Commission and to the scientists who would attend the meeting.

The data format to be used, which has been discussed with the STECF secretariat, is described in annex II joined to this facsimile. Such completed data sets should be uploaded on the **JRC DCF data collection web site** and put at the disposition of the STECF working groups by the intermediation of scientists who will form part of it.

Requests for complementary information related to this upload process may be requested to Hans-Joachim Raetz and to Marco Traa through the following e-mail boxes:

Marco.traa@ec.europa.eu

hans-joachim.raetz@jrc.ec.europa.eu

stecf-secretariat@jrc.ec.europa.eu

Please note that STECF has repeatedly highlighted shortfalls in the data submitted by a number of Member States. Annex I shows a summary table of data not submitted by MS following the data call on effort and catches in 2010. These shortfalls continue to compromise the analysis and member States are asked to pay special attention to providing missing data.

In addition, STECF highlighted several times that it had been unable to comment on the quality of the fleet specific estimates of total catches and discards, mainly due to lack of requested data quality parameters, i.e. number of discards samples, fish measured and aged.

The Commission requests Member States to provide all available information on number of discards samples, fish measured and aged which were implemented during the time-series beforehand specified and either for each metier or for each stock covered by the current call for data. It is recommended that MS authorities liaise with their experts who are expected to attend the STECF meetings to ensure this task is fulfilled.

The Commission reminds Member States that according to Article 8(4) and 8(5) of Regulation (EC) No 199/2008, **reductions and suspensions of European Union financial assistance may be applied by the Commission in case of lack of data transmission by the Member States to regional RFMO and scientific bodies**. Therefore the Member States are encouraged to respect the above mentioned deadline and to provide all requested data.

Member States shall take note of the new Data Validation Tool (provided by DG-JRC and downloadable from the respective website) and are encourage to try it out in order to support the data submissions and enhance the data quality.

Ernesto PENAS LADO
Director

Annex I.

Summary table of data not submitted by MS following the SG MOS data call on effort and catches 2010

Note 1: The data call concerned catch data by metier and ICES division disaggregated by age and length; nominal effort data by metier and ICES division; and effective fishing time by metier and statistical rectangle.

Note 2: the list does not concern the quality of data submitted, but only non-submission

Note 3: the data call 2010 only asked mandatorily for data concerning the year 2009, to be collected under the new DCF.

Member State	DCF data missing still at the STECF November Plenary (before finalisation of the SG MOS working group report)	DCF data missing by end of May 2010 (expiry of the data submission deadline)
Sweden		
Finland	Catch and nominal effort data not disaggregated by area, gear, quarter No fish lengths and age No data on effective fishing time	Catch and nominal effort data not disaggregated by area, gear, quarter No fish lengths and age No data on effective fishing time
Estonia	No catch and discard data on 120 (out of 122) species No discard data No fish lengths and age No vessels u8m and no o10t12m	No catch and discard data on 120 (out of 122) species No discard data No fish lengths and age No vessels u8m and no o10t12m
Latvia	No vessels u8m and no o10t12m	No vessels u8m and no o10t12m
Lithuania	No data for vessels below 12m No catch and discard data for 121 (out of 122) species	No data for vessels below 12m No catch and discard data for 121 (out of 122) species No data on nominal effort No data on effective fishing time
Poland	No catch and discard data for 121 (out of 122) species	No catch and discard data for 121 (out of 122) species No data on effective fishing time
Germany		
Denmark		
Netherlands	No discard data for 119 (out of 122) species	No discard data for 119 (out of 122) species
Belgium	No discard data for one metier	No data at all (see note 1)
United Kingdom		No data for England and Wales
France	No discard data.	No data at all (see note 1)
Ireland		
Spain	No data on vessel lengths No data (catches, effort and effective fishing time)	No data on vessel lengths No data (catches, effort and effective fishing time)

	for the non-coastal fleets, i.e. for areas outside ICES divisions VIIIc and IXa	for the non-coastal fleets, i.e. for areas outside ICES divisions VIIIc and IXa No data (catches, effort and effective fishing time) on deep sea metier No data on effective fishing time
Portugal	No discard data for 121 species (out of 122), no fish lengths and age data	No discard data for 121 species (out of 122), no fish lengths and age data

Annex II.

Format adapted from the latest fleet specific fishing effort and catch data call issued by the European Commission, DG Mare.

Data reports can be provided in simple comma separated text files, Microsoft EXCEL or ACCESS formats. All missing values (empty data cells) must be indicated by a -1.

In contrast to last year's data formats, which were sequential, you are kindly requested to stick this year to a simple table format which makes im- and exporting much more easily.

A. Catch data for 2010 (and the 2003-2009 time period if appropriate – see cover letter), aggregated (sum) by ID except for mean weight and length in landings and discards at age (arithmetic mean). Please ensure that data entries are fully consistent with coding given in Appendixes.

1. ID (this is a unique identifier; e.g. the combination of country, year, quarter, gear, mesh size range, fishery or metier, and area; this is free text with a maximum of 40 characters without space)
2. COUNTRY (this should be given according to the code list provided in Appendix 1)
3. YEAR (this should be given in four digits), like 2004
4. QUARTER (this should be given as one digit), like 1, 2, 3, or 4
5. VESSEL_LENGTH (vessel length should be given according to the code list provided in Appendix 2)
6. GEAR (gear should be given according to the code list provided in Appendix 3, which follows the EU data regulation 1639/2001)
7. MESH_SIZE_RANGE (the mesh size range should be given according to the code list provided in Appendix 4, which largely follows the Council regulation 850/98)
8. FISHERY (species complex and gear) or métier (species complex, gear and vessel characteristics) (this is free text with a maximum of 40 characters without space; this specification may include e.g. target species, roundfish area or quarter) (a fishery can encompass, e.g. more than one mesh size range; in this case separate records have to be provided, e.g. one for each mesh size range, with the same fishery identification)
9. AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 5
10. SPECON to be specified in accordance with Appendix 6, if SPECON is not available or not applicable, "-1" should be given. All landings, discards and other biological parameters falling under the Deep Sea regulations should be aggregated separately, indicated with SPECON=DEEP and appended to the data base. This will allow separate analyses of Deep Sea effort, without conflicts with other effort management schemes.
11. SPECIES (the species should be given according to the code list provided in Appendix 7, which follows the Council Regulation EC 2287/2003)
12. LANDINGS (estimated landings in tonnes should be given; if age based information is present, this quantity should correspond to the sum of products)
13. DISCARDS (estimated discards in tonnes should be given; if age based information is present, this quantity should correspond to the sum of products)
14. NO_SAMPLES_LANDINGS (the number of TRIPS should be given that relate to landings only; a number should be given only if it relates to this fishery only; otherwise "–1" should be given)
15. NO_LENGTH_MEASUREMENTS_LANDINGS (the number of length measurements should be given that relate to landings only; a number should be given only if it relates to this fishery only; otherwise "–1" should be given)
16. NO_AGE_MEASUREMENTS_LANDINGS (the number of age measurements should be given that relate to landings only; a number should be given only if it relates to this fishery only; otherwise "–1" should be given)
17. NO_SAMPLES_DISCARDS (the number of TRIPS should be given that relate to discards only; a number should be given only if it relates to this fishery only; otherwise "–1" should be given)
18. NO_LENGTH_MEASUREMENTS_DISCARDS (the number of length measurements should be given that relate to discards only; a number should be given only if it relates to this fishery only; otherwise "–1" should be given)

19. NO_AGE_MEASUREMENTS_DISCARDS (the number of age measurements should be given that relate to discards only; a number should be given only if it relates to this fishery only; otherwise “–1” should be given)
20. NO_SAMPLES_CATCH (the number of TRIPS should be given that relate to catches only; a number should be given only if it relates to this fishery only; otherwise “–1” should be given)
21. NO_LENGTH_MEASUREMENTS_CATCH (a number of length measurements should be given here if it relates to catch, i.e. landings and discards; a number should be given only if it relates to this fishery only; otherwise “–1” should be given)
22. NO_AGE_MEASUREMENTS_CATCH (a number of age measurements should be given here if it relates to catch, i.e. landings and discards; a number should be given only if it relates to this fishery only; otherwise “–1” should be given)
23. MIN_AGE (this is the minimum age in the data section; if minimum age and maximum age are both “–1”, no age based data are given; otherwise age data must follow in the data section for each age in the age range MIN_AGE to MAX_AGE; minimum age and maximum age must either both be “-1” or both be not “-1”)
24. MAX_AGE (this is the true maximum age in the data section (no plus group is allowed); if minimum age and maximum age are both “–1”, no age based data are given; otherwise age data must follow in the data section for each age in the age range MIN_AGE to MAX_AGE; minimum age and maximum age must either both be “-1” or both be not “-1”)
25. Age 0 (years)=0
26. Age 0 No. Landed (thousands)
27. Age 0 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
28. Age 0 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
29. Age 0 No. Discard (thousands)
30. Age 0 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
31. Age 0 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
32. Age 1 (years)=1
33. Age 1 No. Landed (thousands)
34. Age 1 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
35. Age 1 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
36. Age 1 No. Discard (thousands)
37. Age 1 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
38. Age 1 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
39. Age 2 (years)=2
40. Age 2 No. Landed (thousands)
41. Age 2 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
42. Age 2 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
43. Age 2 No. Discard (thousands)
44. Age 2 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
45. Age 2 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
46. Age 3 (years)=3
47. Age 3 No. Landed (thousands)
48. Age 3 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
49. Age 3 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
50. Age 3 No. Discard (thousands)
51. Age 3 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
52. Age 3 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
53. Age 4 (years)=4
54. Age 4 No. Landed (thousands)
55. Age 4 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
56. Age 4 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
57. Age 4 No. Discard (thousands)
58. Age 4 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
59. Age 4 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
60. Age 5 (years)=5
61. Age 5 No. Landed (thousands)
62. Age 5 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
63. Age 5 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
64. Age 5 No. Discard (thousands)
65. Age 5 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)

66. Age 5 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
67. Age 6 (years)=6
68. Age 6 No. Landed (thousands)
69. Age 6 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
70. Age 6 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
71. Age 6 No. Discard (thousands)
72. Age 6 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
73. Age 6 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
74. Age 7 (years)=7
75. Age 7 No. Landed (thousands)
76. Age 7 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
77. Age 7 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
78. Age 7 No. Discard (thousands)
79. Age 7 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
80. Age 7 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
81. Age 8 (years)=8
82. Age 8 No. Landed (thousands)
83. Age 8 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
84. Age 8 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
85. Age 8 No. Discard (thousands)
86. Age 8 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
87. Age 8 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
88. Age 9 (years)=9
89. Age 9 No. Landed (thousands)
90. Age 9 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
91. Age 9 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
92. Age 9 No. Discard (thousands)
93. Age 9 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
94. Age 9 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
95. Age 10 (years)=10
96. Age 10 No. Landed (thousands)
97. Age 10 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
98. Age 10 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
99. Age 10 No. Discard (thousands)
100. Age 10 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
101. Age 10 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
102. Age 11 (years)=11
103. Age 11 No. Landed (thousands)
104. Age 11 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
105. Age 11 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
106. Age 11 No. Discard (thousands)
107. Age 11 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
108. Age 11 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
109. Age 12 (years)=12
110. Age 12 No. Landed (thousands)
111. Age 12 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
112. Age 12 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
113. Age 12 No. Discard (thousands)
114. Age 12 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
115. Age 12 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
116. Age 13 (years)=13
117. Age 13 No. Landed (thousands)
118. Age 13 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
119. Age 13 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
120. Age 13 No. Discard (thousands)
121. Age 13 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
122. Age 13 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
123. Age 14 (years)=14
124. Age 14 No. Landed (thousands)
125. Age 14 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)

126. Age 14 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
127. Age 14 No. Discard (thousands)
128. Age 14 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
129. Age 14 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
130. Age 15 (years)=15
131. Age 15 No. Landed (thousands)
132. Age 15 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
133. Age 15 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
134. Age 15 No. Discard (thousands)
135. Age 15 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
136. Age 15 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
137. Age 16 (years)=16
138. Age 16 No. Landed (thousands)
139. Age 16 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
140. Age 16 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
141. Age 16 No. Discard (thousands)
142. Age 16 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
143. Age 16 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
144. Age 17 (years)=17
145. Age 17 No. Landed (thousands)
146. Age 17 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
147. Age 17 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
148. Age 17 No. Discard (thousands)
149. Age 17 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
150. Age 17 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
151. Age 18 (years)=18
152. Age 18 No. Landed (thousands)
153. Age 18 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
154. Age 18 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
155. Age 18 No. Discard (thousands)
156. Age 18 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
157. Age 18 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
158. Age 19 (years)=19
159. Age 19 No. Landed (thousands)
160. Age 19 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
161. Age 19 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
162. Age 19 No. Discard (thousands)
163. Age 19 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
164. Age 19 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
165. Age 20 (years)=20
166. Age 20 No. Landed (thousands)
167. Age 20 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
168. Age 20 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
169. Age 20 No. Discard (thousands)
170. Age 20 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
171. Age 20 MEAN Length Discard (cm, precision in mm=1 digits after the comma)

B. Effort data for 2010 (and the 2000-2009 time period if appropriate – see cover letter), aggregated (sum) by ID

1. ID (this is a unique identifier; e.g. the combination of country, year, quarter, gear, mesh size range, fishery or metier, and area; this is free text with a maximum of 40 characters without space)
2. COUNTRY (this should be given according to the code list provided in Appendix 1)
3. YEAR (this should be given in four digits)
4. QUARTER (this should be given as one digit)
5. VESSEL_LENGTH (vessel length should be given according to the code list provided in Appendix 2)

6. GEAR (this identifies gear, and should be given according to the code list provided in Appendix 3, which follows largely the EU data regulation 1639/2001)
7. MESH_SIZE_RANGE (the mesh size range should be given according to the code list provided in Appendix 4, which follows largely the Council regulation 850/98)
8. FISHERY (species complex and gear) or métier (species complex, gear and vessel characteristics) (this is free text with a maximum of 40 characters without space; this specification may include e.g. target species, roundfish area or quarter)
9. AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 5)
10. SPECON to be specified in accordance with Appendix 6, if SPECON is not available or not applicable, "-1" should be given. All landings , discards and other biological parameters falling under the Deep Sea regulations should be aggregated separately, indicated with SPECON=DEEP and appended to the data base. This will allow separate analyses of Deep Sea effort, without conflicts with other effort management schemes.
11. FISHING_ACTIVITY (mandatory only for effort belonging to the Baltic Sea cod plan, the Western Channel sole plan, and the Southern hake and *Nephrops* plan, for other plans – e.g. North Sea sole and plaice plan – or parameters this filed is optional; the nominal fishing activity should be given in days at sea – or days absent from port in the specific case of the Baltic Sea cod plan; if nominal fishing activity is not available, "-1" should be given).
12. FISHING_CAPACITY (mandatory for effort belonging to the sole in the Bay of Biscay plan and the North Sea sole and plaice plan, for other plans or parameters this filed is optional; the nominal fishing capacity should be given in gross tonnage, except for the North Sea sole and plaice plan where the fishing capacity will have to be expressed in kW; if nominal fishing capacity is not available, "-1" should be given)
13. NOMINAL_EFFORT (effort should be given in kW.days, i.e. engine power in kW times days at sea; if nominal effort is not available, "-1" should be given)
14. GT_DAYS_AT_SEA (effort should be given in gross tonnage * days at sea; if the number is not available, "-1" should be given).
15. NO_VESSELS (not for Baltic Sea cod plan), simple integer value of vessels, if the number is not available, "-1" should be given.

C. Specific effort data by rectangle for 2010 (and the 2003-2009 time period if appropriate – see cover letter), in units of fishing hours

1. ID (this is a unique identifier; e.g. the combination of country, year, quarter, gear, mesh size range, fishery or metier, and area; this is free text with a maximum of 40 characters without space)
2. COUNTRY (this should be given according to the code list provided in Appendix 1)
3. YEAR (this should be given in four digits)
4. QUARTER (this should be given as one digit)
5. VESSEL_LENGTH (vessel length should be given according to the code list provided in Appendix 2)
6. GEAR (this identifies gear, and should be given according to the code list provided in Appendix 3, which follows largely the EU data regulation 1639/2001).
7. MESH_SIZE_RANGE (the mesh size range should be given according to the code list provided in Appendix 4, which follows largely the Council regulation 850/98)
8. FISHERY (species complex and gear) or métier (species complex, gear and vessel characteristics) (this is free text with a maximum of 40 characters without space; this specification may include e.g. target species, roundfish area or quarter)
9. AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 5).
10. SPECON to be specified in accordance with Appendix 6, if SPECON is not available or not applicable, "-1" should be given. All landings , discards and other biological parameters falling under the Deep Sea regulations should be aggregated separately, indicated with SPECON=DEEP and appended to the data base. This will allow separate analyses of Deep Sea effort, without conflicts with other effort management schemes.
11. RECTANGLE (text, 4 letters like 44F6)
12. EFFECTIVE_EFFORT (hours fished, simple long numerical integer)

D. Fisheries capacity data of active fishing vessels in the Baltic Sea for the 2003-2010 time period, fully aggregated (counts or sums as defined). Please ensure that data entries are fully consistent with coding given in Appendixes. Note the different time, area and gear aggregations defined in this table D as compared with table B definitions.

16. COUNTRY (this should be given according to the code list provided in Appendix 1)
17. YEAR (this should be given in four digits)
18. VESSEL_LENGTH (vessel length should be given according to the code list provided in Appendix 2)
19. GEAR (use the code "REGGEAR" and aggregate all regulated gears[1] as defined in **COUNCIL REGULATION (EC) No 1098/2007** in case such regulated gear was used once or repeatedly, use the code "NONGEAR" and aggregate all other gears in case regulated gears were never used).
20. AREA (in accordance with definitions of **COUNCIL REGULATION (EC) No 1098/2007** use the code "A" for the vessels which have operated exclusively in ICES subdivisions 22-24, use the code "B" for the vessels which have operated exclusively in ICES subdivisions 25- 28, use the code "AB" for the vessels which have operated in both ICES subdivisions 22-24 and 25-28).
21. NO_VESSELS (simple integer value of vessel counts, if the number is not available, "-1" should be given.
22. FISHING_CAPACITY_kW (to be summed in units of kW; if fishing capacity is not available, "-1" should be given)
23. FISHING_CAPACITY_GT (to be summed in units of gross tonnage; if fishing capacity is not available, "-1" should be given)

[1]) regulated gears coded "REGGEAR" comprise fishing with trawls, Danish seines or similar gear (Appendix 3: OTTER, DEM_SEINE, PEL_TRAWL, PEL_SEINE) of a mesh size equal to or larger than 90 mm, with gillnets (Appendix 3: GILL), entangling nets or trammel nets (Appendix 3: TRAMMEL) of a mesh size equal to or larger than 90 mm, with bottom set lines, longlines except drifting lines, handlines and jigging (Appendix 3: LONGLINE).

Appendix 1

Country coding

COUNTRY	CODE
Belgium	BEL
Denmark	DEN
Estonia	EST
Finland	FIN
France	FRA
Germany	GER
Ireland	IRL
Latvia	LAT
Lithuania	LIT
Netherlands	NED
Poland	POL
Portugal (mainland)	POR
Portugal (Azores)	PTA
Portugal (Madeira)	PTM
Spain (mainland)	SPN
Spain (Canaries islands)	SPC
Sweden	SWE
United Kingdom (Jersey)	GBJ
United Kingdom (Guernsey)	GBG
United Kingdom (Alderny/Sark/Herm)	GBC
United Kingdom (England and Wales)	ENG
United Kingdom (Isle of Man)	IOM
United Kingdom (Northern Ireland)	NIR
United Kingdom (Scotland)	SCO

Appendix 2

Vessel length coding

According to the Data Collection Framework, Member States should be able to provide data characterising fisheries located in the Baltic Sea, the North Sea and the Western Waters and covering the year 2010 on the basis of the following segmentation of the fleet:

(1) Length over all shorter than 10 m.

(2) Length over all of 10 m. to shorter than 12 m.

(3) Length over all of 12 m. to shorter than 18 m.

(4) Length over all of 18 m. to shorter than 24 m.

(5) Length over all of 24 m. to shorter than 40 m

(6) Length over all of 40 m. or longer

However, to ensure consistency with the 2000-2009 or 2003-2009 time series already submitted last year and to ensure compliance with provisions adopted in legal texts supporting fishing effort regimes in the Baltic Sea, North Sea and Western Waters, Member States are requested to submit data according to the following segmentation:

Fishing efforts regimes of the Kattegat, Skagerrak, North Sea and the Western Waters

Vessel length over all classes	**Code**
Length over all shorter than 10 m.	u10m
Length over all of 10 m. to shorter than 15 m.	o10t15m
Length over all of 15 m. and over	o15m

Fishing efforts regimes of the Baltic Sea

Vessel length over all classes	**Code**
Length over all shorter than 8 m.	u8m
Length over all of 8 m. to shorter than 10 m.	o8t10m
(7) Length over all of 10 m. to shorter than 12 m.	o10t12m
(8) Length over all of 12 m. to shorter than 18 m.	o12t18m
(9) Length over all of 18 m. to shorter than 24 m.	o18t24m
(10) Length over all of 24 m. to shorter than 40 m	o24t40m
(11) Length over all of 40 m. or longer	o40m

Appendix 3

Gear coding

TYPES OF FISHING TECHNIQUES			Gear code to be used when answering the data call	Gear code specified for métiers in App. IV of 2008//949/CE
Mobile gears	Beam trawls		BEAM	TBB
	Bottom trawls & demersal seines	Bottom otter trawls, Multi-rig otter trawls or Bottom pair trawls	OTTER	OTB, OTT, PTB
		Fly shooting seines, Anchored seines or Pair seines	DEM_SEINE	SSC, SDN, SPR
	Pelagic trawls & pelagic Seines	Midwater otter trawls or Midwater pair trawls	PEL_TRAWL	OTM, PTM
		Purse seines, Fly shooting seines or Anchored seines	PEL_SEINE	PS
	Dredges		DREDGE	DRB, HMD
Passive gear	Drifting longlines or Set longlines		LONGLINE	LHP, LHM, LTL, LLD, LLS
	Driftnets or Set gillnets (*except Trammel Nets*)		GILL	GNS, GND
	Trammel Nets		TRAMMEL	GTR
	Pots & traps		POTS	FPO

Appendix 4

Mesh size coding

Mesh sizes (and selective devices) to be taken into account when evaluating catches and effort made in relation to metiers described in Appendix IV of the Commission Decision update decision no should be as follows:

- in relation to R(EC) No 88/98 and R(EC) No 2187/2005 for metiers observed in the Baltic Sea;
- in relation to R(EEC) No 1888/85, R(EEC) No 1638/87, R(EC) No 850/98, R(EC) No 2056/2001, R(EC) No 494/2002 for metiers observed in the North Sea and Western Atlantic;
- in relation to R(EC) No 850/98, R(EC) No 2549/2000, R(EC) No 2056/2001, R(EC) No 494/2002, R(EC) No 1386/2007 for metiers observed in the Northern Atlantic.

Nevertheless, to ease the process of submission of data linked to the current call, the Commission would suggest following the mesh size ranges specified in the table below:

Gear type	Mesh size range
Mobile gears	<16
	16-31
	32-54
	55-69
	70-79
	80-89
	90-99
	100-119
	>=105[1]
	>=120
Passive gears	10-30
	31-49
	50-59
	60-69
	70-79
	80-89
	90-99
	100-109
	110-149
	110-156[2]
	150-219
	157-219[2]
	>=220

- [1] To be used for mobile gears in the context the fishing effort management scheme applied in the Baltic Sea
- [2] To be used for passive gears in the context the fishing effort management scheme applied in the Baltic Sea

Appendix 5

Area coding by WG, ICES statistical areas and IBSFC areas for Baltic

Baltic Sea

IBSFC areas for Baltic	*Codes in bold to be used in rela the compulsory provisions of tl Commission Decision 2008/949*	*Codes to be used in relation to gentlemen agreement reached between the DG Mare and the M States about the evaluation of t fishing effort regimes*
III.c.22	**22**	
III.c.23	**23**	
III.c.24	**24**	
III.c.25	**25**	
III.c.26	**26**	
III.c.27	**27**	
III.c.28	**28**[3]	
III.c.28.2		**28.2**
III.d.29	**29**	
III.d.30	**30**	
III.d.31	**31**	
III.d.32	**32**	

North Sea, Skagerrak, Kattegat and Eastern Channel

ICES statistical areas	*Codes in bold to be used in rela the compulsory provisions of tl Commission Decision 2008/949*	*Codes to be used in relation to gentlemen agreement reached between the DG Mare and the M States about the evaluation of t fishing effort regimes*
II EU waters	(2)	**2 EU**
III.a.N	(3a)	**3an**
III.a.S		**3as**
IV	**4**	
VII.d	**7d**	

Northern Shelf

ICES statistical areas	*Codes in bold to be used in rela the compulsory provisions of tl Commission Decision 2008/949*	*Codes to be used in relation to gentlemen agreement reached between the DG Mare and the M States about the evaluation of t fishing effort regimes*

- [3] Area 28.2 included.

I	(1)	**1 COAST**[7]
		1 RFMO[8]
II non EU waters	(2)	**2 COAST**
		2 RFMO
V.a	**5a**	
V.b EU waters	(5b)	**5b EU**[9]
V.b non EU waters		**5b COAST**
		5b RFMO
VI.a	**6a**	
VI.b EU waters	(6b)	**6b EU**
VI.b non EU waters		**6b RFMO**
VII.a	**7a**	
VII Biological Sensitive Area		**BSA**[10]
VII.b	**7b**[4]	
VII.c EC Waters	(7c)	**7c EU**
		7c RFMO
VII.e	**7e**	
VII.f	**7f**	
VII.g	**7g**[5]	
VII.h	**7h**[6]	
VII.j EU waters	(7j)	**7j EU**[11]
VII.j non EU waters		**7j RFMO**
VII.k EU waters	(7k)	**7k EU**
VII.k non EU waters		**7k RFMO**
XII	**12**	
XIV.a	**14a**	**14a**
XIV.b	(14b)	**14b COAST**
		14b RFMO

- [4] ICES statistical rectangles of ICES division VIIb and corresponding to the BSA shall be included.
- [5] ICES statistical rectangles of ICES division VIIg and corresponding to the BSA shall be included.
- [6] ICES statistical rectangles of ICES division VIIh and corresponding to the BSA shall be included.
- [7] COAST will refer to waters under jurisdiction of a non-EU coastal state.
- [8] RFMO will refer to waters where fisheries are managed through RFMOs.
- [9] 5b EU will have to be considered as covering the following ICES statistical rectangles: 49D6, 49D7, 49D8, 49D9, 49E0, 49E1, 49E2, 49E3, 49E4, 50E5.
- [10] BSA (Biological Sensitive Area) will have to be considered as covering the following ICES statistical rectangles: 35D8, 35D9, 35E0, 35E1, 34D8, 34D9, 34E0, 34E1, 33D8, 33D9, 33E0, 33E2, 32D8, 32D9, 32E0, 32E1, 32E2, 31D8, 31D9, 31E0, 31E1, 31E2, 30D9, 30E0, 30E1, 30E2, 29D9, 29E0, 29E1, 29E2, 28D9, 28E0, 28E1, 28E2.
- [11] ICES statistical rectangles of ICES division VIIj and corresponding to the BSA shall be included.

Southern Shelf

ICES statistical areas	***Codes in bold to be used in rela the compulsory provisions of tl Commission Decision 2008/949***	***Codes to be used in relation to gentlemen agreement reached between the DG Mare and the M States about the evaluation of t fishing effort regimes***
VIII.a	**8a**	
VIII.b	**8b**	
VIII.c	**8c**	
VIII.d EU waters	(8d)	**8d EU**
VIII.d non EU waters		**8d RFMO**
VIII.e EU waters	(8e)	**8e EU**
VIII.e non EU waters		**8e RFMO**
IX.a	**9a**	
IX.b EU waters	(9b)	**9b EU**
IX.b non EU waters		**9b RFMO**
X EU waters	(10)	**10 EU**
X non EU waters		**10 RFMO**

CECAF

FAO statistical areas	***Codes to be used in relation to compulsory provisions of the Commission Decision 2008/949***	***Codes to be used in relation to gentlemen agreement reached between the DG Mare and the M States about the evaluation of t fishing effort regimes***
34.1.1 EU waters		**34.1.1 EU**
34.1.1 non EU waters		**34.1.1 COAST**
34.1.2 EU waters		**34.1.2 EU**
34.1.2 non EU waters		**34.1.2 COAST**
		34.1.2 RFMO
34.1.3		**34.1.3 COAST**
		34.1.3 RFMO
34.2.0 EU waters		**34.2.0 EU**
34.2.0 non EU waters		**34.2.0 COAST**
		34.2.0 RFMO

Appendix 6

Coding of specific conditions related to the Cod Plan, to Annex IIB of R(EC) No 53/2010, to Deep Sea regulations, to Sole Bay of Biscay R(EC) No 388/2006, to fully documented fisheries and of Baltic Technical conditions in Council Regulation (EC) No 2187/2005

Specific conditions associated to fishing effort regimes

Condition	Code
Cod Plan R(EU) No 53/2010	
Effort deployed by those vessels granted the <1.5% derogation excluding them from the effort regime	CPart11
effort deployed by vessels operating in MS schemes under Article 13	CPart13
Annex IIB of R(EU) No 53/2010	
Less than 5 tons of hake and 2,5 tons of *Nephrops* in the catches	IIB72ab
Baltic Technical Conditions	
Gear equipped with a BACOMA	BACOMA
Gear equipped with a T90	T90
Effort Regime in Deep Sea fisheries	
Deep-water species	DEEP[12]
Sole Bay of Biscay R(EC) No 388/2006	
Special fishing permit (>2 tons of sole/A)	SBcIIIart5
Fully documented fisheries R(EU) No 53/2010	
Catch and effort data for 2010 for vessels participating in trials on fully documented fisheries in the annex IIA areas (art 2 R(EU) no 53/2010)	FDFIIA
Catch and effort data for 2010 for vessels participating in trials on fully documented	FDFBAL

[12] Where the deep-sea species related effort is not identified by an métier-sampling exclusively for

deep sea species under DCF, the effort should be identified as follows:

(1) the gear is exclusively used in deep-sea fisheries;

(2) catch of Deep Sea species retained >100kg (as per the Regulation), or

(3) catch of Deep Sea species retained <100kg but the percentage of Deep Sea species >=35%..

fisheries in the Baltic Sea (art 38 R(EU) no 53/2010)	

Appendix 7

Species coding according to Council Regulation (EC) No. 2298/2003

Common name	Alpha-3 code	Scientific name
1. Albacore	ALB	*Thunnus alalunga*
2. Alfonsinos	ALF	*Beryx spp.*
3. American plaice	PLA	*Hippoglossoides platessoides*
4. Anchovy	ANE	*Engraulis encrasicolus*
5. Anglerfish	ANF	*Lophiidae*
6. Antarctic icefish	ANI	*Champsocephalus gunnari*
7. Arctic skate	RJG	*Raja hyperborea*
8. Atlantic catfish	CAT	*Anarhichas lupus*
9. Atlantic halibut	HAL	*Hippoglossus hippoglossus*
10. Atlantic salmon	SAL	*Salmo salar*
11. Atlantic thornyhead	TJX	*Trachyscorpia cristulata*
12. Baird's slickhead	ALC	*Alepocephalus bairdii*
13. Basking shark	BSK	*Cetorhinus maximus*
14. Bigeye tuna	BET	*Thunnus obesus*
15. Birdbeak dogfish	DCA	*Deania calcea*
16. Blackbelly rosefish	BRF	*Helicolenus dactylopterus*
17. Black cardinal fish	EPI	*Epigonus telescopus*
18. Black dogfish	CFB	*Centroscyllium fabricii*
19. Black scabbardfish	BSF	*Aphanopus carbo*
20. Blackfin icefish	SSI	*Chaenocephalus aceratus*
21. Blackmouth catshark	SHO	*Galeus melastomus*
22. Blue antimora	ANT	*Antimora rostrata*
23. Blue ling	BLI	*Molva dypterigia*
24. Blue marlin	BUM	*Makaira nigricans*
25. Blue whiting	WHB	*Micromesistius poutassou*
26. Bluefin tuna	BFT	*Thunnus thynnus*
27. Blutnose sixgill shark	SBL	*Hexanchus griseus*
28. Capelin	CAP	*Mallotus villosus*
29. Cod	COD	*Gadus morhua*
30. Common mora	RIB	*Mora moro*
31. Common sole	SOL	*Solea solea*

32. Common shrimp	CSH	*Crangon crangon*
33. Crab	PAI	*Paralomis spp.*
34. Dab	DAB	*Limanda limanda*
35. Deep-sea red crab	KEF	*Chaceon affinis*
36. Edible Crab	CRE	*Cancer pagurus*
37. Eelpouts	ELZ	*Lycodes spp.*
38. European conger	COE	*Conger conger*
39. European pearch	FPE	*Perca fluviatilis*
40. Flatfish, flounder	FLX	*Pleuronectiformes, Platichthys flesus*
41. Forkbeards	FOX	*Phycis spp.*
42. Frilled shark	HXC	*Chlamydoselachus anguineus*
43. Greater silver smelt	ARU	*Argentina silus*
44. Greenland halibut	GHL	*Reinhardtius hippoglossoides*
45. Grenadier	GRV	*Macrourus spp.*
46. Great Atlantic Scallop	SCE	*Pecten maximus*
47. Great lantern shark	ETR	*Etmopterus princeps*
48. Greenland shark	GSK	*Somniosus microcephalus*
49. Grey rockcod	NOS	*Lepidonotothen squamifrons*
50. Gulper shark	GUP	*Centrophorus granulosus*
51. Haddock	HAD	*Melanogrammus aeglefinus*
52. Hake	HKE	*Merluccius merluccius*
53. Herring	HER	*Clupea harengus*
54. Horse mackerel	JAX	*Trachurus spp.*
55. Humped rockcod	NOG	*Gobionotothen gibberifrons*
56. Iceland catshark	APQ	*Apristurus laurussonii*
57. Kitefin shark	SCK	*Dalatias licha*
58. Knifetooth dogfish	SYR	*Scymnodon rigens*
59. Krill	KRI	*Euphausia superba*
60. Lantern fish	LAC	*Lampanyctus achirus*
61. Large-eyed rabbitfish	CYH	*Hydrolagus mirabilis*
62. Leafscale gulper shark	GUQ	*Centrophorus squamosus*
63. Lemon sole	LEM	*Microstomus kitt*
64. Ling	LIN	*Molva molva*
65. Lumpsucker	LUM	*Cyclopterus lumpus*
66. Longnose velvet dogfish	CYP	*Centroscymnus crepidater*

67. Mackerel	MAC	*Scomber scombrus*
68. Marbled rockcod	NOR	*Notothenia rossii*
69. Mediterranean slimehead	HPR	*Hoplostethus mediterraneus*
70. Megrims	LEZ	*Lepidorhombus spp.*
71. Mouse catshark	GAM	*Galeus murinus*
72. Northern prawn	PRA	*Pandalus borealis*
73. Norway lobster	NEP	*Nephrops norvegicus*
74. Norway pout	NOP	*Trisopterus esmarki*
75. Norway redfish	SFV	*Sebastes viviparus*
76. Norwegian skate	JAD	*Raja nidarosiensis*
77. Orange roughy	ORY	*Hoplostethus atlanticus*
78. 'Penaeus' shrimps	PEN	*Penaeus spp*
79. Pike	FPI	*Esox lucius*
80. Pike pearch	FPP	*Sander lucioperca*
81. Plaice	PLE	*Pleuronectes platessa*
82. Polar cod	POC	*Boreogadus saida*
83. Pollack	POL	*Pollachius pollachius*
84. Porbeagle	POR	*Lamna nasus*
85. Portuguese dogfish	CYO	*Centroscymnus coelolepis*
86. Rabit fish	CMO	*Chimaera monstrosa*
87. Rays	RAJ	*Rajidae*
88. Redfish	RED	*Sebastes spp.*
89. Red Seabream	SBR	*Pagellus bogaraveo*
90. Risso's smooth-head	PHO	*Alepocephalus rostratus*
91. Roughead grenadier	RHG	*Macrourus berglax*
92. Roundnose grenadier	RNG	*Coryphaenoides rupestris*
93. Round ray	RJY	*Raja fyllae*
94. Sailfin roughshark	OXN	*Oxynotus paradoxus*
95. Saithe	POK	*Pollachius virens*
96. Sandeel	SAN	*Ammodytidae*
97. Scallop	KMV	*Chlamys livida*
98. Seabass	BSS	*Dicentrarchus labrax*
99. Short fin squid	SQI	*Illex illecebrosus*
100. Silver scabbardfish	SFS	*Lepidopus caudatus*
101. Skates	SRX	*Rajidae*

102. Smooth lantern shark	ETP	*Etmopterus pusillus*
103. Snow crab	PCR	*Chionoecetes spp.*
104. South Georgian icefish	SGI	*Pseudochaenichthys georgianus*
105. Spanish ling	SLI	*Molva macrophthalmus*
106. Spinous spider crab	SCR	*Maja squinado*
107. Sprat	SPR	*Sprattus sprattus*
108. Spurdog	DGS	*Squalus acanthias*
109. Straightnose rabbitfish	RCT	*Rhinochimaera atlantica*
110. Swordfish	SWO	*Xiphias gladius*
111. Toothfish	TOP	*Dissostichus eleginoides*
112. Tope shark	GAG	*Galeorhinus galeus*
113. Turbot	TUR	*Psetta maxima*
114. Tusk	USK	*Brosme brosme*
115. Unicorn icefish	LIC	*Channichthys rhinoceratus*
116. Velvet belly	ETX	*Etmopterus spinax*
117. White marlin	WHM	*Tetrapturus alba*
118. Whiting	WHG	*Merlangius merlangus*
119. Witch flounder	WIT	*Glyptocephalus cynoglossus*
120. Wreckfish	WRF	*Polyprion americanus*
121. Yellowfin tuna	YFT	*Thunnus albacores*
122. Yellowtail flounder	YEL	*Limanda ferruginea*

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

POLICY DEVELOPMENT AND CO-ORDINATION
COMMON FISHERIES POLICY AND AQUACULTURE

Brussels,
MARE A2/MT/ D(2011)

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Subject: **CORRIGENDUM**

Fishing effort management schemes related to recovery and management plans in the Baltic Sea, the North Sea, to the Western waters, to the deep sea fisheries and review of fisheries located in the Celtic Sea.

Message:

On Wednesday 23-02-2011 DG MARE sent a data call to all Member States' permanent representations regarding the preparation of the analytical work of the STECF 'Working Group on fishing effort regime evaluations' (reference Ares (2011)200418-23/02/2011).

With this CORRIGENDUM, we draw your attention to a change that needs to be made to the specifications given in the above mentioned data call. Another point of attention is a correction of the summary table of data not submitted by Member States (annex I of the data call).

It is important that the experts of the STECF are in a position to clearly identify the trips of vessels participating in trials on fully documented fisheries, as defined in appendix 6, in order to prevent confusion and discussion about the quality of the results. To make that possible, annex II part A (Catch data), part B (Effort data) and part C (Specific effort data by rectangle) of the data call need to be revised.

Correction of the Summary table (annex I)

Annex I of the data call incorrectly stated that Belgium had failed to submit discard data for one metier at the moment of the STECF November Plenary. The Belgium discard data were available at the STECF November meeting 2010.

Fully documented fisheries in Annex IIA areas and the Baltic sea

Fully documented fisheries trips FDFIIA and FDFBAL can fall under more than one special condition, i.e. FDFIIA in Annex IIA with the special conditions CPart11, CPart 13, and FDFBAL with special conditions BACOMA and T90. This would impede the data aggregation to be accurate.

In order to avoid such potential conflicts, it is necessary that the trips of special condition FDFIIA in Annex IIA areas and of special condition FDFBAL in the Baltic Sea are aggregated separately and appended to the data submission, exactly as it is done for the special condition DEEP.

For that reason point 10 of Annex II part A (Catch data), part B (Effort data) and part C (Specific effort data by rectangle) is substituted as follows:

For part A (Catch data), point 10:

> **10. SPECON** to be specified in accordance with Appendix 6, if SPECON is not available or not applicable, "-1" should be given. All landings, discards and other biological parameters falling under the Deep Sea regulations should be aggregated separately, indicated with SPECON=DEEP and appended to the data base. This will allow separate analyses of Deep Sea effort, without conflicts with other effort management schemes. ***All landings, discards and other biological parameters of vessels participating in trials on fully documented fisheries in the Annex IIA areas (R(EU) no 53/2010) or in the Baltic Sea (R(EC) No 1098/2007) should be aggregated separately, indicated with SPECON=FDFIIA for the Annex IIA areas and SPECON=FDFBAL for the Baltic Sea and appended to the data base. This will allow separate analyses of data related to fully documented fisheries, without conflicts with other effort management schemes.***

For part B (Effort data), point 10:

> **10. SPECON** to be specified in accordance with Appendix 6, if SPECON is not available or not applicable, "-1" should be given. All effort parameters falling under the Deep Sea regulations should be aggregated separately, indicated with SPECON=DEEP and appended to the data base. This will allow separate analyses of Deep Sea effort, without conflicts with other effort management schemes***. All effort parameters of vessels participating in trials on fully documented fisheries in the Annex IIA areas (R(EU) no 53/2010) or in the Baltic Sea (R(EC) No 1098/2007) should be aggregated separately, indicated with SPECON=FDFIIA for the Annex IIA areas and SPECON=FDFBAL for the Baltic Sea and appended to the data base. This will allow separate analyses of data related to fully documented fisheries, without conflicts with other effort management schemes.***

For part C (Specific effort data by rectangle), point 10:

> **10. SPECON** to be specified in accordance with Appendix 6, if SPECON is not available or not applicable, "-1" should be given. The effort parameter falling under the Deep Sea regulations should be aggregated separately, indicated with SPECON=DEEP and appended to the data base. This will allow separate analyses of Deep Sea effort, without conflicts with other effort management schemes***. The effort parameter of vessels participating in trials on fully documented fisheries in the Annex IIA areas (R(EU) no 53/2010) or in the Baltic Sea (R(EC) No 1098/2007) should be aggregated separately, indicated with SPECON=FDFIIA for the Annex IIA areas and SPECON=FDFBAL for the Baltic Sea and appended to the data base. This will allow separate analyses of data related to fully documented fisheries, without conflicts with other effort management schemes.***

I hope this clarification makes it possible to apply the categorizations mentioned in order to improve the usefulness of the data provided by the Member States.

Member States are invited to provide the requested data to the Commission and to the scientists who would attend the meeting no later than **6 May 2011**.

Ernesto PENAS LADO
Director

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ANNEX 3: EXPERT DECLARATIONS

Declarations of invited experts are published on the STECF web site on https://stecf.jrc.ec.europa.eu/home together with the final report.

European Commission

EUR 25110 EN – Joint Research Centre – Institute for the Protection and Security of the Citizen
Title: Scientific, Technical and Economic Committee for Fisheries. Evaluation of Fishing Effort Regimes Regarding Annexes IIA, IIB and IIC of TAC & Quota Regulations, Celtic Sea and Bay of Biscay (STECF-11-13).

EWG-11-11 members: Barratt, K., Bell, E., Carlshamre, S., Davie, S., Demaneche, S., Dolder, P., Holmes, S., Jardim, E., Kempf, A., Kovsars, M., Lövgren, J., O'Hea, B., Radtke, K., Raid, T., Silva, C., Van der Kamp, P., Vermand, Y., Mitrakis, N.

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Abstract
EWG-11-11 meeting was held on 26 – 30 September 2011 in Cadiz (Spain). This report covers the Annexes IIA, IIB and IIC of TAC & Quota Regulations, Celtic Sea and Bay of Biscay and provides fleet specific trends in catch (including discards), nominal effort and catch (landings) per unit of effort in order to advise on fleet specific impacts on stocks under multiannual management plans. STECF reviewed the report during its November 2011 plenary meeting.

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